

11.0 Cumulative Effects Analysis [12-JAN-2004] (final rev. 1)

OBJECTIVE

The objectives of cumulative effects analysis are to develop an interdisciplinary scientific characterization of relationships between human activities and associated river system response, and to use that information to develop recommendations for management practices and actions that will provide sustainability to socioeconomic interests while maximizing the long-term biological/physical integrity of the river system. To accomplish these objectives, cumulative effects analysis requires

- a scientific foundation to understand relationships of human actions and natural processes, and
- a decision-making process based on this scientific foundation that effectively integrates stakeholder values and generates equitable recommendations that are supported by the stakeholders.

It is important to note that existing policies at all levels - local, state, and federal - can constrain the decision-making process, as can limitations to available resources, including funding limitations related to the implementation of recommended actions.

APPROACH

The first steps in the cumulative effects analysis are to (1) define detailed objectives for this planning study; (2) identify appropriate decision processes to achieve those objectives; and (3) select a supporting, integrated scientific methodology that informs this decision process. Once these steps are complete, the decision process will be implemented using the supporting scientific information.

Much work is currently being done on the methods and processes of cumulative effects analysis, as evidenced by recent publications in peer-reviewed literature. In addition to these recent advances in methods, several applications of cumulative effects analysis are underway and will be completed soon, including the application of cumulative effects analysis to the Upper Yellowstone River. In an effort to capitalize on those ongoing efforts, the cumulative effects analysis will include training for members of the YRCDC, their advisory committees, and other interested stakeholders on the current state-of-the-art in methods and processes for cumulative effects analysis. Following this training, detailed objectives for developing management practices and actions that can be supported by cumulative effects analysis will be defined. Appropriate methods will then be selected to assess the effectiveness of alternative approaches to achieve these objectives.

STUDY TASKS

Subtask 11.1 Define Decision Process, Cumulative Effects Analysis (CEA) Objectives, and Select Appropriate Scientific Analysis Methods

This subtask includes four work items:

1. Conduct a training workshop – The purpose of the workshop is to inform all stakeholders on cumulative effects processes and supporting methodologies that are relevant to this planning study. The workshop will be conducted during the first year at one location in the study region. A regional or national trainer will conduct the workshop. The deliverable for this work item is the workshop and copies of training materials for participants.
2. Define decision processes and detailed objectives – Following the training, a local facilitator will work with the YRCDC, the Resource Advisory Committee (RAC), the Technical Advisory Committee (TAC), and the project delivery team (PDT) to define decision processes and detailed objectives for developing management practices and actions. Two objectives will be to define the variables that are key to clearly demonstrating cumulative impacts of the region, and to assure that studies specific to this project provide information to these variables. This process will continue throughout the life of the study and will set the example for how the decision-making process might continue after the study period. The deliverables for this work item include facilitating meetings to define the decision process and objectives, and a report that documents the decision process and the detailed objectives.
3. Review recent literature – A thorough review of the literature will be conducted to identify all relevant methods to support the detailed objectives. CEA is a relatively recent regulatory requirement, and therefore much of the research in this area is just now being published in the peer-reviewed and project literature. Methods are based on the objectives and constraints of the analysis. The deliverable for this work item is a literature review paper and one copy of all pertinent articles and reports collated in a binder with a table of contents.
4. Select scientific methods – Based on the literature review and the information presented in the training workshop, the YRCDC and the PDT will select appropriate scientific methods to support analysis for the detailed objectives. On-going review and adjustments will be made to the Scopes of Work, as needed, to reflect the selected CEA methodology and detailed objectives. The selected methodology should integrate research across technical disciplines and be able to explicitly distinguish between natural processes and human-activities. The methodology must be able to synthesize information that is both available in the peer reviewed literature and collected specifically for this project to provide a basis for future planning of land-use (or other) strategies that are sustainable through time within the Yellowstone River Basin. The deliverable for this work item is a selected method to support each objective.

Subtask 11.2 Cumulative Effects Assessment.

In this subtask ,selected scientific methods will be implemented to assess cumulative environmental effects that have occurred along the Yellowstone corridor, and what effects are likely to occur in the future based on trends in anthropogenic activity. The entire study team including the YRCDC and their advisory committees, the public, the local facilitator, the PDT, and other scientific personnel or contractors (as deemed necessary) that have collected data specific to this study will participate in the CEA. The broad background of the participants in this task will facilitate synthesis of the linkages between key variables that span the breadth of specialties. The deliverables for this subtask are a scientific report that documents the CEA and provides a framework that defines the current state of the Yellowstone River corridor and the cumulative effects of changes on the system. The CEA will assist decision makers and landowners in evaluating future land use actions along the River.

Subtask 11.3 Recommendation of Best Management Practices (BMPs).

The intent of this task is to incorporate the scientific findings of the CEA into a portfolio of best management practices (BMPs) that can help guide future land use decision - making for the entire Yellowstone River corridor and for specific reaches of the river. This task will formulate BMPs that will attempt to meet the objectives identified in Task 11.1 while managing the cumulative effects at a regional level. The evaluation of BMPs will use the results of the CEA and the linkages between key variables in an attempt to optimize the outcomes. If necessary, scenario analysis or alternative evaluation will be utilized in this analysis. The BMP formulation and evaluation process will include substantial public involvement to aid in the prioritization and optimization of outcomes. The deliverable of this task will be a decision document and supporting appendixes that provide recommendations for management practices and actions that are helpful in meeting the objectives defined by the entire study team and the public.

Subtask 11.4 Meetings and Coordination

The cumulative effects analysis task will kickoff in the first year and be completed in the fifth year of the study. The Corps PDT will attend the initial CEA training workshop and approximately 6 coordination meetings throughout the course of the study. It is anticipated that several public meetings will be held throughout the five year process to gather input in meeting the objectives for the CEA and BMP formulation tasks. For budgetary purposes preparation for attending these public meetings is included in this scope, but the cost for actual attendance and travel is included in the Public Coordination/Outreach scope of work.

**Yellowstone River Cumulative Effects Study
CEA & BMP Formulation SOW Budget**

26-Nov-03

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Total
Total Costs	\$100,000	\$125,000	\$115,800	\$30,000	\$4,000	\$24,000	\$398,800
Contract Labor, Benefits, ODC	\$14,000	\$0	\$0	\$0	\$0	\$0	\$14,000
DNRC Labor, Benefits, Indirect, ODC	\$5,000	\$10,000	\$10,000	\$5,000	\$0	\$0	\$30,000
USCOE Labor, Benefit, Indirect, ODC	\$35,000	\$87,000	\$77,800	\$10,000	\$4,000	\$24,000	\$237,800
YRCDC Labor, Benefits, Indirect, ODC	\$46,000	\$28,000	\$28,000	\$15,000	\$0	\$0	\$117,000
Non-Federal Cost Share	\$65,000	\$38,000	\$38,000	\$20,000	\$0	\$0	\$161,000
DNRC Labor,Benefits, Indirect, ODC	\$5,000	\$10,000	\$10,000	\$5,000	\$0	\$0	\$30,000
YRCDC Labor, Benefits, Indirect, ODC	\$46,000	\$28,000	\$28,000	\$15,000	\$0	\$0	\$117,000
YRCDC Cash	\$14,000	\$0	\$0	\$0	\$0	\$0	\$14,000
Federal Cost	\$35,000	\$87,000	\$77,800	\$10,000	\$4,000	\$24,000	\$237,800

Task Descriptions	Deliverables
1 Define Process, Objectives, & Methods	See PMP - Appendix A
2 CEA	See PMP - Appendix A
3 BMP Formulation & Evaluation	See PMP - Appendix A
4 Meetings & Coordination	See PMP - Appendix A
5 General Expenses	CADD, GIS, etc...
6 Travel & Per Diem	6 meetings - 3 people 3 days per meeting

Note - Tasks 3 includes participation by the following tech studies:

Riparian, Avian, Invasive Plants, Water Quality (incl. Nuisance Algae), Fisheries, Wetlands,
Socio-Economics, Hydrology, Hydraulics, and Geomorphology

Note - Tasks 4 includes participation by the following tech studies:

Riparian, Avian, Invasive Plants, Water Quality (incl. Nuisance Algae), Fisheries, Wetlands,
Socio-Economics, Hydrology, Hydraulics, and Geomorphology

Note - Contract labor = \$75 per hour; USCOE labor = \$100 per hour; DNRC labor = \$25 per hour

DNRC costs assumed

YRCDC costs taken from Tom Yoder's Cumulative Effects write-up

12. Prepare Final Study Report

OBJECTIVE

The feasibility report will be a presentation of the study analyses and results, and will document compliance of the findings with all applicable, statutes, executive orders and policies. The feasibility report will include documentation of the results of the technical data gathering studies, cumulative effects analysis, public consultation, and the recommended best management practices. The primary purpose of the report is to document the current state of the Yellowstone River ecosystem, the cumulative effects of natural and man-made changes to the river and its floodplain, and recommend best management practices to aid local and regional planners with decision making for future changes.

Report review is critical for purposes of public understanding and to further solidify public awareness, understanding and support of the study findings and recommendations. The draft report and supporting documentation will undergo a thorough independent review prior to its release. The report will be forwarded to each of the Conservation Districts along the river, state and federal agencies, tribes, municipalities, county boards, weed control districts, and private conservation groups. It will also be posted on the Yellowstone River WEB site for public review prior to finalizing.

STUDY TASKS

12.1 Develop Preliminary Draft Report.

Assemble a draft report of study findings and recommendations. The report will consolidate the technical research data, the cumulative effects analysis, and the recommended best management practices into a comprehensive report.

12.2 Quality Assurance / Quality Control (QA/QC).

The draft report will be distributed to the PDT, TAC, YRCDC, and technical study PI's for their concurrent QC review. All review participants will document any comments and provide them to the Corps PM and Sponsor PM. A QC Report that documents the comments and resolution will be prepared.

After addressing the QC comments the PDT, TAC, YRCDC and technical study PI's, and senior Corps personnel will perform a QA review. The QA review will consist of review of the QC report to ensure that the PM's have responded to the QC comments

12.3 Prepare Final Draft Report.

The Corps PM and Sponsor PM will revise the preliminary draft report to incorporate the QA/QC comments.

12.4 Independent Technical Review.

An ITR will be performed for the final draft report and supporting documentation. This will include review of the cumulative effects analysis, recommendations, and over report. The ITR will be conducted by an entity that is not involved in the scoping or preparation of the study products, such as a separate Corps District other than the Omaha District, an independent consultant, or an un-involved state or Federal agency. An ITR report will be prepared to document comments and issues and provided the Corps and Sponsor PM's.

12.5 Prepare Final Report.

The Corps PM and Sponsor PM will revise the preliminary draft report to incorporate the ITR comments.

12.6 Final Report Review Conference.

A final review conference will be conducted in conjunction with the release of the final report. This task is covered under Task 2. Public Participation.

12.7 General Expenses.

This task will include clerical support, reproduction, postage, etc... for preparing and distributing the draft and final reports.

Yellowstone River Cumulative Effects Study
Final Report SOW Budget

7-Jan-04

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Total
Total Costs	\$27,500	\$34,000	\$13,600	\$20,000	\$13,600	\$0	\$17,100	\$125,800
Contract Labor, Benefits, ODC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DNRC Labor, Benefits, Indirect, ODC	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	\$5,000
USCOE labor, benefit, indirect, ODC	\$14,000	\$14,000	\$9,100	\$20,000	\$9,100	\$0	\$11,000	\$77,200
YRCDC Labor,Benefits, Indirect, ODC	\$13,500	\$15,000	\$4,500	\$0	\$4,500	\$0	\$6,100	\$43,600
YRCDC Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Non-Federal Cost Share	\$13,500	\$20,000	\$4,500	\$0	\$4,500	\$0	\$6,100	\$48,600
DNRC Labor,Benefits, Indirect, ODC	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	\$5,000
YRCDC Labor,Benefits, Indirect, ODC	\$13,500	\$15,000	\$4,500	\$0	\$4,500	\$0	\$6,100	\$43,600
YRCDC Cash	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Cost	\$14,000	\$14,000	\$9,100	\$20,000	\$9,100	\$0	\$11,000	\$77,200

Task Descriptions	Deliverables
1 Develop Preliminary Draft Report	see PMP - Appendix A
2 QA/QC	See PMP - Appendix A
3 Develop Final Draft Report	See PMP - Appendix A
4 Independent Technical Review	See PMP - Appendix A
5 Develop Final Report	See PMP - Appendix A
6 Final Report Review Conference	See Task 2. Public Participation
7 General Expenses	See PMP - Appendix A

13. Program Management

PURPOSE

Secure funding for the study and insure that the necessary amounts are available for the various project phases over the duration of the study. This includes crediting of in-kind services. Closeout audits upon completion of the feasibility report are necessary to insure that the funds were allocated to the purposes intended. The audit will also examine the credits allowed for the in-kind work. Contingencies are funds that can be used for emergencies since several tasks can not be easily estimated. These include potential cost overruns for review of the feasibility report and submittal of it to HQ.

STUDY TASKS

1. Corps Upward Reporting, Budgeting, and Congressional Briefings and Fact Sheets.

An analyst from the Programs Management Branch Division will support the feasibility study in terms of funding and management of the financial resources. The analyst is responsible for preparing, updating and submitting to Northwestern Division various Corps budget documents, funding requests, justification sheets, fact sheets, reprogramming requests, and expenditure reports. In addition, the analyst assists the PM in the process of insuring there is adequate balance of sponsor/federal funds in various accounts prior to making expenditures.

2. Final Study Audit.

Following completion of the study, a financial audit of the Federal and non Federal cost-shares will be performed to review each parties share. This includes official accounting of in-kind service credits.

3. Project Closeout.

This task involves final completion of the study and removal from reporting databases, information systems, etc...

4. Official Records File Management.

This task involves final file archiving and storage for permanent records.

**Yellowstone River Cumulative Effects Study
Program Management SOW Budget**

7-Jan-04

	Task 1	Task 2	Task 3	Task 4	Total
Total Costs	\$17,000	\$19,000	\$3,600	\$6,500	\$46,100
Contract Labor, Benefits, ODC	\$0	\$0	\$0	\$0	\$0
DNRC Labor, Benefits, Indirect, ODC	\$0	\$0	\$0	\$0	\$0
USCOE labor, benefit, indirect, ODC	\$17,000	\$14,000	\$2,100	\$4,000	\$37,100
YRCDC Labor,Benefits, Indirect, ODC	\$0	\$5,000	\$1,500	\$2,500	\$9,000
YRCDC Cash	\$0	\$0	\$0	\$0	\$0
Non-Federal Cost Share	\$0	\$5,000	\$1,500	\$2,500	\$9,000
DNRC Labor,Benefits, Indirect, ODC	\$0	\$0	\$0	\$0	\$0
YRCDC Labor,Benefits, Indirect, ODC	\$0	\$5,000	\$1,500	\$2,500	\$9,000
YRCDC Cash	\$0	\$0	\$0	\$0	\$0
Federal Cost	\$17,000	\$14,000	\$2,100	\$4,000	\$37,100

Task Descriptions	Deliverables
1 Corps Upward Reporting & Budgeting	see PMP - Appendix A
2 Final Study Audit	See PMP - Appendix A
3 Project Closeout	See PMP - Appendix A
4 Official Records File Management	See PMP - Appendix A

APPENDIX B

STATUTE COMPLIANCE PLAN

Definition

A Statute Compliance Plan is necessary to ensure adherence to Federal and State statutes. The plan specifies a checklist of statutes to be considered in development of the project. The plan does not specify in detail which organization is responsible for compliance and when the compliance must take place because these statutes must be considered constantly during the project development by several organizations. This plan establishes a quick reference for team members to use when confirming project compliance.

Statute Checklist

The following is a checklist of the statutes to be considered during the development of the project:

Cultural Statutes

Archeological and Historical Preservation Act, as amended, 16 U.S.C. 469, et seq. This may apply if there are feasibility plan elements that affect these resources.

National Historic Preservation Act, as amended, 16 U.S.C. 470a et seq. See above response.

Environmental Statutes

Clean Air Act, as amended, 42 U.S.C. 185h-7, et seq. This may apply if there are plan elements that would affect air quality.

Clean Water Act, as amended. (Federal Water Pollution Control Act) 33 U.S.C. 1251, et seq. This may well apply to any planned action elements

Endangered Species Act, as amended, 16 U.S.C. 1531, et.seq. Same response as above.

Federal Water Project Recreation Act, as amended, 16 U.S.C. 460-1 (12), et seq. This may apply if plan elements affect properties developed with use of FWPCA funds.

Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661, et seq. This requires consultation with the U.S. Fish and Wildlife Service for water resource development and environmental restoration projects.

Land and Water Conservation Fund Act (LWCFA), as amended, 16 U.S.C. 4601-4601-11, et seq. This may apply if plan elements affect properties developed with LWCFA funds.

National Environmental Policy Act, as amended, 42 U.S.C. 4321, et seq. The procedural aspects of this law will be followed during the routine plan formulation and cumulative impact assessment phases. Public meetings held by the sponsor and Corps will announce that we are seeking compliance with this law as we obtain scoping and planning inputs.

Protection of Wetlands (E.O. 11990). Planning procedures will insure that wetlands resources and values are considered in the process. Specific projects will avoid or minimize wetland impacts.

CEQ Memorandum, August 11, 1980. Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing NEPA. See above response.

Real Estate Statutes

Uniform Relocation Assistance and Real Property Acquisition Policies Act. Specific Projects will follow these requirements. This will involve the Corps Real Estate Division.

Federal Acquisition Regulation 454.303-1. Procurements for this project will follow this regulation. The formal plan of any procurement, by the non-Federal sponsor, must be submitted to the Corps of Engineers for review and approval before the acquisition is made. All procurement plans by either the non-Federal sponsor or the Corps will be reviewed by the Corps' Contracting Division.

Other Statutes

Rivers and Harbors Act, 33 U.S.C. 401, et seq. The planning and any resultant specific projects will comply with the requirements of this statute which regulates placement of obstructions in a navigable waterway.

Watershed Protection and Flood Prevention Act, 16 U.S.C. 1101, et seq. Plan elements and specific projects will comply with the requirements of this statute.

Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271, et seq. Currently, there is no such proposed activity on the river, nor is on the National Inventory of Rivers potentially eligible for inclusion in the wild and scenic system. However, specific projects may need to consider impacts that are important to state-cited wild and scenic values.

Flood Plain Management (E.O. 11988). Planning activities will consider and accommodate the intent of this executive order.

Coordination with State and Local Governments (E.O. 12372). See above response.

Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure (E.O. 12906). 1994. Intended to Encourage Access to Public Spatial Data. Avoid Duplication of Effort. Requires agencies to document any new geospatial data generated, using a standard adopted by the Federal Geographic Data Committee.

State/Local Statutes

The Natural Streambed and Land Preservation Act of 1975. MCA Section 26-1510 et seq. Planning and plan elements will comply with these statutes.

Montana Environmental Policy Act, MCA Section 75-10-101 et seq. Essentially mirrors the Federal Act. See response to the National Act.

Local Regulations of Subdivisions, MCA Section 76-3-101 et seq. Planning and plan elements will consider the effects of this statute, as applicable.

Public Water Supply Act, MCA Section 75-6-101 et seq. See above response.

Water Use Act, MCA Section 85-2-101 et seq. See above response.

Montana Conservation District Law, MCA Section 76-15-101 et seq.

Montana Floodplain/Floodway Act, MCA Section 76-5-208 et seq.

APPENDIX C

QUALITY CONTROL PLAN

PURPOSE

This Quality Control Plan is intended to meet the quality assurance (QA) and quality control (QC) goals and policies of the Omaha District for feasibility studies which also implement the Corps HQ directives for District quality management. Reference is made to the District's Quality Management Plan, dated 12 December 2002. (Appendix B-4). District organizational elements involved in Quality Control include the Program Review Board, the Functional Chiefs, the PM, the PDT. Vertical teams with higher CE offices are used when necessary, including In Progress Reviews, Feasibility Review Conferences and lessons learned processes. The policies also cover work performed by contractors and sponsors. The goal of QA/QC practices are to assure delivery of the highest quality products and services, that meet or exceed customer requirements and expectations.

APPLICABLE PROJECT AND PRODUCTS

The feasibility study will investigate cumulative effects of natural and man-made changes to the Yellowstone River corridor. The study area extends over 500 miles from near Gardiner, Montana to its confluence with the Missouri River in North Dakota. The main objective is to develop an array of best management practices for maintaining and enhancing the river corridor in consultation with the sponsor, and to prepare draft and final feasibility reports detailing study findings and recommendations. The report will be submitted to higher Corps authority for the purposes of seeking Congressional authorization for any future actions required in the river corridor. The details on the study area and study tasks are presented in Appendix A of the PMP. A secondary objective is to utilize the study products to supplement ongoing work by the sponsor in constructing a GIS for the Yellowstone River. Most of the technical studies that will be conducted to acquire the data for the cumulative effects analysis will be performed by contractors. Plan formulation and development of the Feasibility Report will be the responsibility of the entire PDT including the sponsor and their advisory committees.

QUALITY OBJECTIVES AND PERFORMANCE CRITERIA

Quality management procedures, including Quality Assurance / Quality Control (QA/QC), will be in place early during the course of technical research studies. Later, both QA/QC and Independent Technical Review (ITR) will be essential to successfully completing the cumulative effects analysis and best management practices formulation tasks and producing the final study report. The following procedural and customer (sponsor) criteria will be used in development of the feasibility study:

The following procedural and customer (sponsor) criteria will be used in development of the feasibility study:

1. Federal Cost Sharing Agreement (FCSA) and Project Management Plan for the Yellowstone Corridor Study, Montana and North Dakota.
2. U.S. Army Corps of Engineers Business Process, ER 5-1-11, 17 August, 2001.
3. Planning Guidance, U.S. Army Corps of Engineers, ER1105-2-100, 22 April 2000.
4. Procedures for Implementing the National Environmental Policy Act, ER 200-2-2, 29 March, 1996.

PRODUCT MILESTONES (Completion Dates)

Draft Feasibility Report	(15-JUN-2008)
Final Feasibility Report	(31-AUG-2008)

FEASIBILITY PRODUCT STUDY COSTS

The entire feasibility study is currently estimated to cost approximately \$5,800,000. A detailed study cost estimate summary, a schedule of fiscal year spending, and a schedule of Federal and non-Federal expenditures by account is provided in the PMP. A work breakdown matrix that identifies the estimated effort and cost of each work item (task) associated with the study is located in Appendix A of the PMP.

QUALITY CONTROL REVIEW PROCESSES

Corps quality control process outlined in the PMP will guide product development. The process will function slightly differently in the two different phases of the study: (1) baseline research phase (data collection); (2) cumulative effects assessment/best management practices formulation and final study report. A key feature throughout these phases, however, is the efficient work to be conducted by the PDT's from both the Corps and the Sponsor.

During the baseline research phase, contracting of the physical, socioeconomic and biological tasks require largely interim and final QA/QC reviews on the part of the PDT and Sponsor to insure that contract specifications are met. Each individual technical study will develop a Quality Control Plan (QCP) which will be submitted to the PDT and Sponsor for approval prior to initiation of the study. The QCP will outline the QC review process the contractor (or Corps team) will use to ensure the quality of the products they produce. A QC report will be submitted with the final product deliverables documenting the QC review process, comment resolution, and revisions (if necessary). The PDT (including the Sponsor) will conduct a QA review of the end product deliverables and a

review of the QC report to ensure that the work has been thoroughly checked and all comments were satisfactorily addressed.

During the CEA/BMP formulation and report development phases the PDT (including the Sponsor) will be directly involved in analysis and compilation of the draft and final study reports. This team will develop a QCP and conduct internal QC review for the draft study report. The QA will be conducted by Corps senior technical experts/supervisors and senior staff from the Sponsor's Advisory Committees. The draft report will undergo Independent Technical Review (ITR) by an independent team from another Corps of Engineers District office, another Federal agency, or contractor. Resolution of comments on the draft will be handled jointly by the PDT, Sponsor, and the ITR team. The final report will incorporate and address all public review comments.

ITR consists of an additional independent QC review to insure that all products are of high technical standards, conform with customer needs, and conform with Corps policy and procedures. In Corps of Engineers General Investigations (GI) studies, which may be quite complex, current policy requires that District in-house QCR reviews are supplemented by ITR. Thus an ITR team, having sufficient expertise and experience in the required disciplines, will be identified. These individuals will need to have independence from the PDT, and will be assigned by the Northwestern Division (NWD) in consultation with the Omaha District and the Sponsor.

QUALITY CONTROL REVIEW SCOPE

A detailed description of individual responsibilities, individual scopes of work, and specific work tasks to be performed by the PM, each study team member or organization during the feasibility study is in Appendix A of the PMP. Each office or individual will maintain their own working files of information or material generated for this study, including any GIS electronic files. The Omaha District Plan Formulation Branch, through the PM, will maintain original copies of all technical reports and appendices, as well as the current PMP. The Sponsor, Montana NRIS, and the PDT will determine the information that should be placed on the Yellowstone River WEB page for public review and use.

The scope of work for the ITR team has not yet been determined except in general terms. It is expected the work would include review of the CEA/BMP formulation and study report. The ITR team members will be designated by NWD following consultation with the District. Several individuals may be selected, representing the areas of Hydrology, Geomorphology, Economics, Environmental and Plan Formulation. The PMP indicates that some of the ITR may be conducted by agencies, institutions or consultants in Montana who already have considerable experience and expertise from working similar river issues, but who will not be involved directly in the study. For example, the U.S.G.S., the USBR, State agencies, and private consultants have been working these issues for many years.

PDT AND ITR TEAM

A list of study team members is shown on page C-____. As indicated above, designation of the independent review team which may necessitate designation once the funding is received and an initial kick-off meeting has been initiated. Thus, a list of potential agencies are shown for illustrative purposes. It is also possible that the ITR might be a contracted study task.

SIGN-OFF SHEET AND DOCUMENTATION

Sign-off sheets for product/QCR and the independent reviews are attached. An original sign-off copy for each product certification sheet will be maintained by the PM in a dedicated folder. Sign-off sheets signatures will be obtained at the applicable review meetings or after circulation of the document for individual sign-off.

SCHEDULE

A detailed schedule is included in Appendix A of the PMP.

QUALITY ASSURANCE ON CONTRACTOR'S WORK

The QA process involves a management review of the Contractor's QC programs and processes and a contract compliance review on the Contractor's work. By contract the Contractor is required to submit a contractor QCP as the first item of work in the contract or delivery order for an indefinite delivery contract. The PDT and Sponsor will conduct the QA audit during the life of the contract. The team will perform contract compliance at different times during the contract, focusing on process, not content. The review is not an ITR. The Contractor is responsible for addressing any findings resulting from QA audits.

PROJECT DEVELOPMENT TEAM (PDT)

Name	ORG	Position	Phone	E-Mail
Greg Johnson	CENWO-PM-AP	PM, SM	(402) 221-7258	donald.a.becker@usace.army.mil
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Kevin Adams	CENWO-ED-HD	Hydraulics	(402) 221-4120	kevin.d.adams@usace.army.mil
Doug Clemetson	CENWO-ED-HE	Hydrologist Supervisory	(402) 221-4582	douglas.j.clemetson@usace.army.mil
Roger Kay	CENWO-ED-HE	Hydrologist	(402) 221-3150	roger.l.kay@usace.army.mil
John Remus	CENWO-ED-HF	Sedimentology Supervisory	(402) 221-4620	john.i.remus@usace.army.mil
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William F. Schwening	CENWO-ED-GD		(402) 221-4615	william.f.schwenning@usace.army.mil
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Mary Lee Johns	CENWO-PM-AE	Native American Consultation Specialist	(402) 221-4594	mary.l.johns@usace.army.mil
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Allen Steinle	CENWO-OD-RMT	Reg. State Program Manager	(406) 444-1375	allan.e.steinle@usace.army.mil
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FEASIBILITY STUDY
Yellowstone River, Montana and North Dakota

PROJECT DEVELOPMENT TEAM QA/INTERFACE SIGN OFF SHEET

BY SIGNING I ATTEST THAT I HAVE REVIEWED AND AGREE WITH THE TECHNICAL FINDINGS OF STUDY CONTRACTORS AND THE TECHNICAL HYDROLOGIC AND HYDRAULIC WORK COMPLETED BY OMAHA DISTRICT ENGINEERING DIVISION AND HAVE CONDUCTED AN INTERFACE REVIEW OF ALL OF THESE REPORTS FOR SUFFICIENCY TO CONDUCT FOLLOWUP CUMULATIVE ASSESSMENT AND PLAN FORMULATION WORK .

<u>Discipline Lead</u>	<u>Signature</u>	<u>Date</u>
Greg Johnson Project Manager CENWO-PM-AP	_____	_____
William Schwening Mapping Specialist CENWO-ED-GD	_____	_____
Roger Kay Hydrologic Engineer CENWO-ED-HE	_____	_____
Kevin Adams Hydraulic Engineer CENWO-ED-HB	_____	_____
John Garrison Geomorphologist CENWO-ED-HF	_____	_____
Eric Laux Biologist CENWO-PM-AE	_____	_____
Gene Sturm Economist CENWO-PM-AE	_____	_____
Mary Lee Johns Native American Specialist CENWO-PM-AE	_____	_____
Thomas Ingram Attorney CENWO-OC	_____	_____

FEASIBILITY STUDY
Yellowstone River, Montana and North Dakota

PROJECT DEVELOPMENT TEAM QUALITY CONTROL REVIEW SIGN OFF SHEET

BY SIGNING I ATTEST THAT I HAVE REVIEWED AND AGREE WITH THE TECHNICAL FINDINGS OF THE
 FEASIBILITY STUDY AND THE CONTENT OF THE FEASIBILITY REPORT.

<u>Discipline Lead</u>	<u>Signature</u>	<u>Date</u>
Greg Johnson Project Manager CENWO-PM-AP	_____	_____
William Schwening Mapping Specialist CENWO-ED-GD	_____	_____
Roger Kay Hydrologic Engineer CENWO-ED-HE	_____	_____
Kevin Adams Hydraulic Engineer CENWO-ED-HB	_____	_____
John Garrison Geomorphologist CENWO-ED-HF	_____	_____
Eric Laux Biologist CENWO-PM-AE	_____	_____
Gene Sturm Economist CENWO-PM-AE	_____	_____
Mary Lee Johns Native American Specialist CENWO-PM-AE	_____	_____
Thomas Ingram Attorney CENWO-OC	_____	_____

FEASIBILITY STUDY
Yellowstone River, Montana and North Dakota

FUNCTIONAL CHIEF SIGN OFF SHEET

BY SIGNING THIS SHEET I ATTEST THAT I HAVE REVIEWED AND AGREE WITH THE FINDINGS AND
CONCLUSIONS OF THE FEASIBILITY PLAN AND REPORT

<u>Discipline Lead</u>	<u>Signature</u>	<u>Date</u>
Dave Brandon Chief CENWO-PM-AP	_____	_____
Doug Clemetson, P.E. Chief CENWO-ED-HE	_____	_____
Jeff Mcclenathan, P.E. Chief CENWO-ED-HD	_____	_____
John Remus, P.E. Chief CENWO-ED-HF	_____	_____
Candice Gorton Chief CENWO-PM-AE	_____	_____

FEASIBILITY STUDY
Yellowstone River, Montana and North Dakota

Independent Technical Review (ITR) Team

NOTE: THE ITR TEAM IS YET TO BE IDENTIFIED. THE LISTINGS IN THE TABLE ARE EXAMPLES FOR ILLUSTRATIVE PURPOSES ONLY.

Name	Organization	Discipline	Phone	E-Mail
	U.S. Bureau of Reclamation	Socio-economics		
	U.S. Geological Survey; ;Montana-DNRC	Hydrology & Hydraulics		
	U.S. Bureau of Reclamation Montana-DFWP	Environmental & Geology		
	_____ District	Plan Formulation		
Ed Woodruff	Northwestern Division	Review Coordinator		

FEASIBILITY STUDY
Yellowstone River, Montana and North Dakota

ITR TEAM REPORT SIGN-OFF SHEET

THE SIGNATORIES BELOW CERTIFY THAT THE REVIEWS CONDUCTED ARE INDEPENDENT AND
CONDUCTED BY INDIVIDUALS WHO ARE QUALIFIED TO CONDUCT SUCH APPRAISALS.

DISCIPLINE	NAME	DATE
Economics	_____	_____
Hydrology	_____	_____
Hydraulics	_____	_____
Geomorphology	_____	_____
Environmental	_____	_____
Economics	_____	_____
Plan Formulation	_____	_____
Review Coordinator	_____	_____

FEASIBILITY STUDY
Yellowstone River, Montana and North Dakota

DISTRICT PROJECT COMPLETION CERTIFICATION

Project: Yellowstone River Corridor Study (Section 419, WRDA 1999).

Product: Feasibility Study Report

All actions and verifications noted herein have been accomplished including all Quality Control and Independent Technical Reviews. The Yellowstone River Corridor, Montana and North Dakota feasibility report is complete, and meets professional quality standards. The undersigned certify that quality control has been accomplished by the Omaha District.

DIVISION /BRANCH	SIGNATURE	DATE
Engineering Division	_____	_____
Programs & Project Management Division, Planning Branch	_____	_____
Office of Counsel	_____	_____
Operations Division, Regulatory Branch	_____	_____

REVIEW MATRIX

Reviews will be completed for each product as noted below. An example of each sign-off sheet is attached.

Product	PDT/QC/QA Check	Independent Review Check	District Completion Certification
Draft Report	X	X	X
Final Report	X	X	X
Study Completion			X

PROJECT MANAGEMENT PLAN FOR YELLOWSTONE RIVER, MONTANA AND NORTH DAKOTA CUMULATIVE EFFECTS STUDY

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PROJECT MANAGEMENT PLAN FOR YELLOWSTONE RIVER, MONTANA, NORTH DAKOTA CUMULATIVE EFFECTS STUDY

CHAPTER 1. STUDY AUTHORITY, PURPOSE AND SCOPE

The 905 (b) Analysis Report for the Yellowstone River recommended a feasibility study for the river corridor to address important hydrologic, socioeconomic and biological issues. These are beyond the capability of state and local interests to resolve, given the existing circumstances and conflicts regarding water and related land resources issues in the two-state, multi-county region. The 905 (b) report was approved by Corps Headquarters on 13 August 2003.

Study Authority

The study was authorized by Section 431 of the Water Resources Development Act of 1999 (WRDA 99). Specific wording follows:

Study. The Secretary shall conduct a comprehensive study of the Yellowstone River from Gardiner, Montana to the confluence of the Missouri River to determine the hydrologic, biological and socioeconomic cumulative impacts on the river.

Consultation and Coordination. The Secretary shall conduct the study in consultation with the United States Fish and Wildlife Service, the United States Geological Survey and the Natural Resources Conservation Service and with the full participation with the state of Montana and tribal and local entities, and provide for public participation.

Report. Not later than 5 years after enactment of this Act, the Secretary shall submit to Congress a report on the results of this study.

Purpose of the Project Management Plan and Feasibility Study

The 905 (b) analysis indicated the study goal is to develop a comprehensive analysis of past, present and likely future impacts and formulate recommendations for the river corridor which will enable the sustainable use of important resources to meet local, state and national interests.

The Project Management Plan (PMP) was developed jointly by the Corps and the Sponsor (Yellowstone River Conservation District Council). This plan of work for the feasibility phase defines the scope and conduct of the feasibility phase. It documents the Corps and Sponsor commitments required for the project and provides a common

understanding among all parties involved. Specifically, it covers study authority, organization, work breakdown, schedule, communication, change control, quality control, contracting, budgets, financial monitoring, and auditing. As a working document, it is subject to revision as needed throughout the study process. All changes will be subject to approval by the Sponsor and the Corps.

The product of the feasibility study, a feasibility report will be used by the non-Federal sponsor, other local agencies, the State of Montana, the Corps of Engineers, and ultimately the U.S. Congress to initiate additional studies and any necessary remedial approaches, including structural and nonstructural actions. The final report will provide a complete presentation of the study analyses and results, and will document compliance with all applicable Federal, State and local statutes, executive orders, and policies. The necessary environmental analyses, as applicable to any recommendations or plans, will also be included. Further, the final report will provide a sound basis for authorities to utilize the recommendations in making future decisions affecting the Yellowstone River.

CHAPTER 2. STUDY AREA LOCATION, OBJECTIVES AND DESCRIPTION

Study Area Congressional Districts

The study area extends along the Yellowstone River valley from Gardiner, Montana, at the northern boundary of Yellowstone National Park, to its confluence with the Missouri River in McKenzie County, North Dakota. Montana's Congressional delegation is made up of Senators Max Baucus and Conrad Burns and Representative Dennis Rehberg. North Dakota's Congressional delegation is made up of Senators Kent Conrad and Byron Dorgan, and Representative Earl Pomeroy.

Study Area Objectives

The study objectives were identified in the 905(b) analysis through consultation with the Sponsor, its constituent Conservation Districts, and collaboration with Federal and State agencies and local interests in the Yellowstone area. General objectives include anticipating and planning for future hazards, disasters, and needs; utilizing new information as it becomes available; and maintaining focus on issues and concerns along the river's main-stem. In addition, there is a need to reach beyond these needs and develop detailed information/data to assist in forming best management practices (BMP's) for future river management. Cumulative effects assessment (CEA) and trend analysis will assist in identifying the future without conditions that are used as a base for evaluating measures and recommendations. The CEA will incorporate findings and recommendations that are being developed from the Special Area Management Plan (SAMP) study that focuses on the upper 85 miles of the study area in Park County, Montana. The SAMP study is being conducted by the Corps and other Federal, State, and local interests, and has been ongoing since FY 2000. The purpose of the SAMP study is to assess the long-term cumulative effects of bank stabilization and to arrive at appropriate guidance for future permit actions under the Section 404 regulatory program.

The process and results have influenced the PMP objectives and scope. It has included extensive involvement of local interests and has been conducted with the assistance of the Governor of Montana's Task Force and various Federal and state agencies. Currently, the SAMP is scheduled for completion in early 2004.

Objectives to be addressed in the study are listed below. Specific tasks are now being negotiated and will be part of the PMP. These include the following:

- Develop a Geographic Information System (GIS) computer data base for the Yellowstone River corridor that can be utilized by the many agencies and interests for support of many ongoing programs and missions. Major task groupings include: (1) Conduct of hydrologic, hydraulic, geomorphic, and biological baseline studies to better understand the functioning of the fluvial and ecological dynamics of the river; (2) Through the GIS and Yellowstone river WEB site, enable interim and final results of various mapping efforts and studies to be available to a wide variety of agencies, organizations and other publics; (3) Develop information on river demands, preferences, and effects of various user groups through socioeconomic and land use baseline studies, and (4) Define gaps in technical knowledge and conduct studies of river uses to determine future levels of sustainability.
- Conduct cumulative assessment and trend studies to better understand how the infrastructure, including bank stabilization, bridges, and other man-made structures interact with the existing river channel structure and functions.
- Assess needs for future resource management through development of technical products in various areas. These include reports in the areas of hydrology, hydraulics, geomorphology, water quality, biological resources, and socio-economics.
- Examine and analyze measures for river management that improve the projected future condition. These include: (1) development of policy and procedures guidance to be used in a river-focused BMP manual, (2) changes to programs and policies, including planning, incentive based and regulatory strategies to more efficiently conserve resources and enable wise development; (3) methods to sustain agricultural and fish and wildlife resources; (4) methods to adapt infrastructure to the user needs while maintaining proper river function; and (5) methods to restore aquatic and wetland habitats.
- Involve local entities, stakeholders, congressionals and individuals in the study process through use of regularly scheduled, open meetings. Special public meetings, tour of sites, notices and draft reports are additional methods to be used.
- Complete a Feasibility Report and make it and all appendices and study products available to agencies and the public via the Yellowstone Web site on the Montana Natural Resource Information System.

Study Area Overview

The Yellowstone River is a mountain stream from its headwaters in Yellowstone National Park and adjacent mountain ranges to near the city of Livingston. It has a rocky channel bottom and narrow valley, sometimes punctuated with falls and rapids. Downstream it then makes a transition through a short foothill region near Columbus, before assuming a more sluggish character and a broad alluvial valley bordered by terraces and bluffs as it passes through the Great Plains region some 400 miles downstream to the Missouri River. Figure 1 depicts the river within Montana, its main right bank tributaries, and the major political subdivisions of the Montana portion of the Yellowstone Basin.

The mountainous headwater areas provides a prolific source of continuous stream flow to the mainstem, and these flows are augmented downstream by several large, right bank tributaries. During each year, there are typically two peaks of runoff: foothills and plains runoff which occurs in late winter and spring; and rainstorm/snow melt runoff which typically peaks in early summer. Mean annual flow ranges from 3,731 ft³/sec at Livingston to 12,750 ft³/sec near the mouth at Sidney, based on a long stream-flow record. Flood or over-bank flows occur frequently. The upper reaches experienced severe floods during 1996 and 1997. Flooding is also common along the lower river, especially where late winter or early spring ice breakup create ice jams and obstruct flow.

The river channel features a meandering to braided pattern over much of its length, and many side channels and islands are found in many reaches. While the river has a steep slope of about 32 feet/mile in the mountains, the average slope in the foothills and plains region is about 7 feet/mile. In the lower reaches near Sydney, the river flows across a former glacial lake bed, where the slope flattens to a drop of one foot per mile.

The river and its valley are considered to have resources of national, state and local significance, all of which are too numerous to condense here. However, it is believed to be the nation's longest, un-impounded river, and retains much of its natural character as seen by Captain Lewis in the summer of 1806. The upper reaches support an excellent cold-water fishery, while the middle and lower reaches support a diverse, warm water fishery. Extensive gallery forests of cottonwood and associated shrub lands occur in the meander belt along with aquatic and wetland areas associated with active and overflow

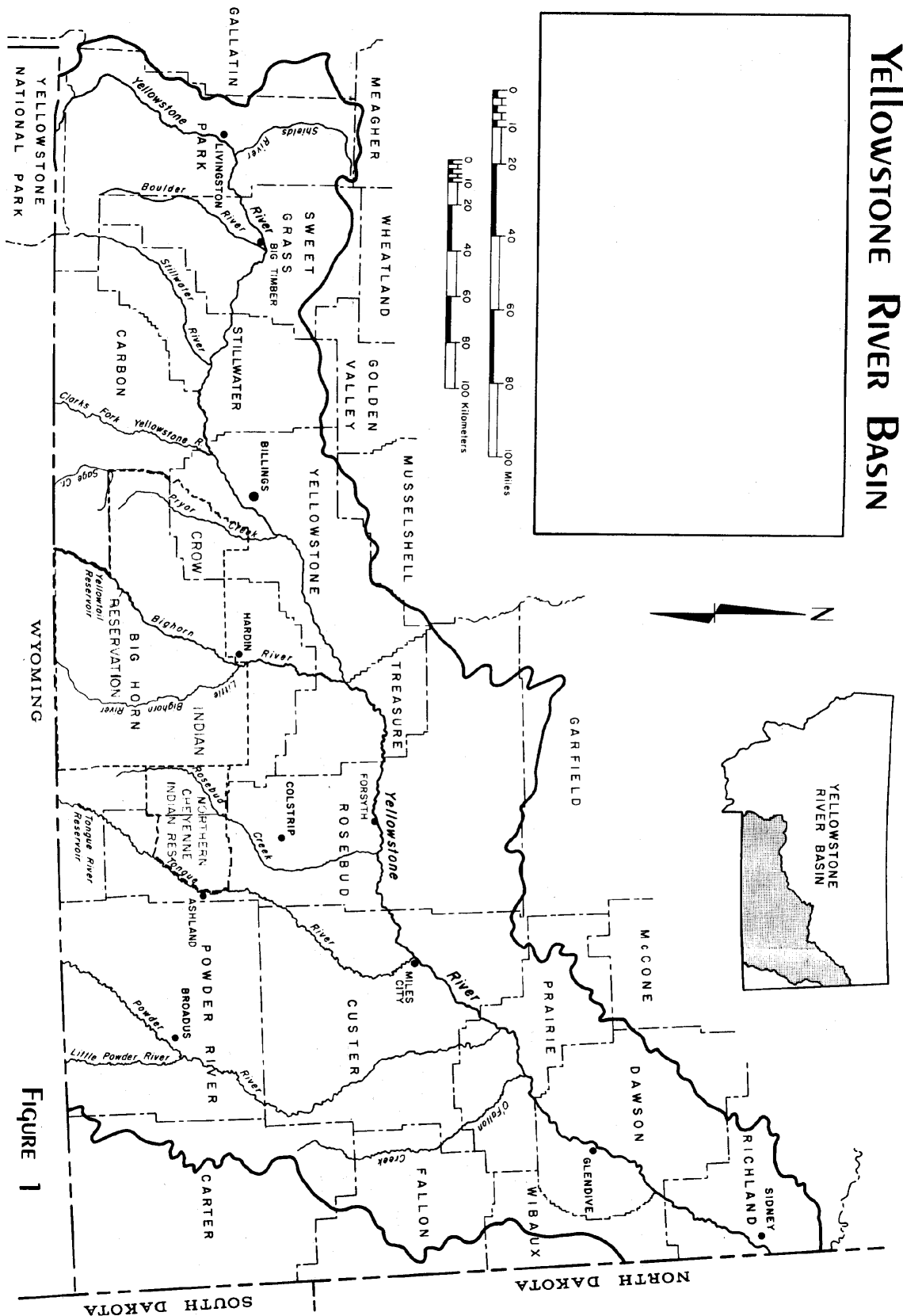


Figure 1

side channels and backwaters. While some flow modification has occurred along the river due to storage of water along some major tributaries and some diversions, the current seasonal flow pattern is believed to be sufficient to maintain the existing channel morphology.

Development of valley lands by various agricultural, municipal and industrial interests has been more or less continuous since settlement around the turn of the century. Recreational use has been more recent and is especially important in the upper valley. Aside from urban or urbanizing areas near Livingston, Billings, Miles City and Glendive, most of the flood plain is in agricultural use. Much of the best farmland is under irrigation, developed largely through federal-state-local cooperative programs. Flow diversions for beneficial water uses are common along the river as are flow returns from municipal waste-water plants and agricultural uses. Data from a DNRC 1977 study suggested that slightly more than 6.0% of the historical flow is consumed. That same study indicated that less than 10 per cent of the stream-flow in the basin was being diverted for agricultural purposes. The specific amount of water consumed in the basin has not been specifically identified, but probably hasn't changed much.

Suspended sediment and dissolved solids concentrations are low in the cooler waters of the mountainous and foothills portions of the river, but tend to become higher downstream as the river warms and assumes an alluvial character. Below Billings to the mouth, the stream has higher concentrations of sediment and dissolved solids, largely due to natural factors. Aside from sporadic local problems at times of low flow in late summer, fall and winter, there is currently little impairment of water quality for all recognized uses along the main stem. There are some concerns, however, about wastewater returns along at least one of the rightbank tributaries. These are related to development of natural gas reserves.

CHAPTER 3 WORK BREAKDOWN STRUCTURE

The Work Breakdown Structure (WBS) is a description of the scope of work into its component products and sub-products in a hierarchy of levels. A product at any level is made up of those products in the levels below it. The breakdown of the scope continues down to a level at which work can be assigned to a specific organization (a District branch or section). This generally corresponds to the lowest level of cost account reporting. For contracted or in-kind work, the breakdown is similar, as each subproject, parent task and subordinate task needs to be specified and provided an estimated cost. Table 1 below lists the parent tasks and shows the number of subtasks that are included in each. Appendix A provides a detailed work breakdown of parent tasks, subtasks, and costs.

Table 1. Generalized Work Breakdown

Task No.	Parent Task Description
1.0	Project Management
2.0	Public Involvement
3.0	Tribal Consultation
4.0	Biology Studies
5.0	Socioeconomic Studies
6.0	Basic Data and Topographic Surveys
7.0	Information Management / GIS Development
8.0	Hydrology Analysis
9.0	Hydraulics Analysis
10.0	Geomorphology Analysis
11.0	Cumulative Effects / Formulation
12.0	Report Development (incl. ITR)
13.0	Program Management; Closeout/Audit

CHAPTER 4. ORGANIZATION BREAKDOWN AND ROLES AND RESPONSIBILITIES

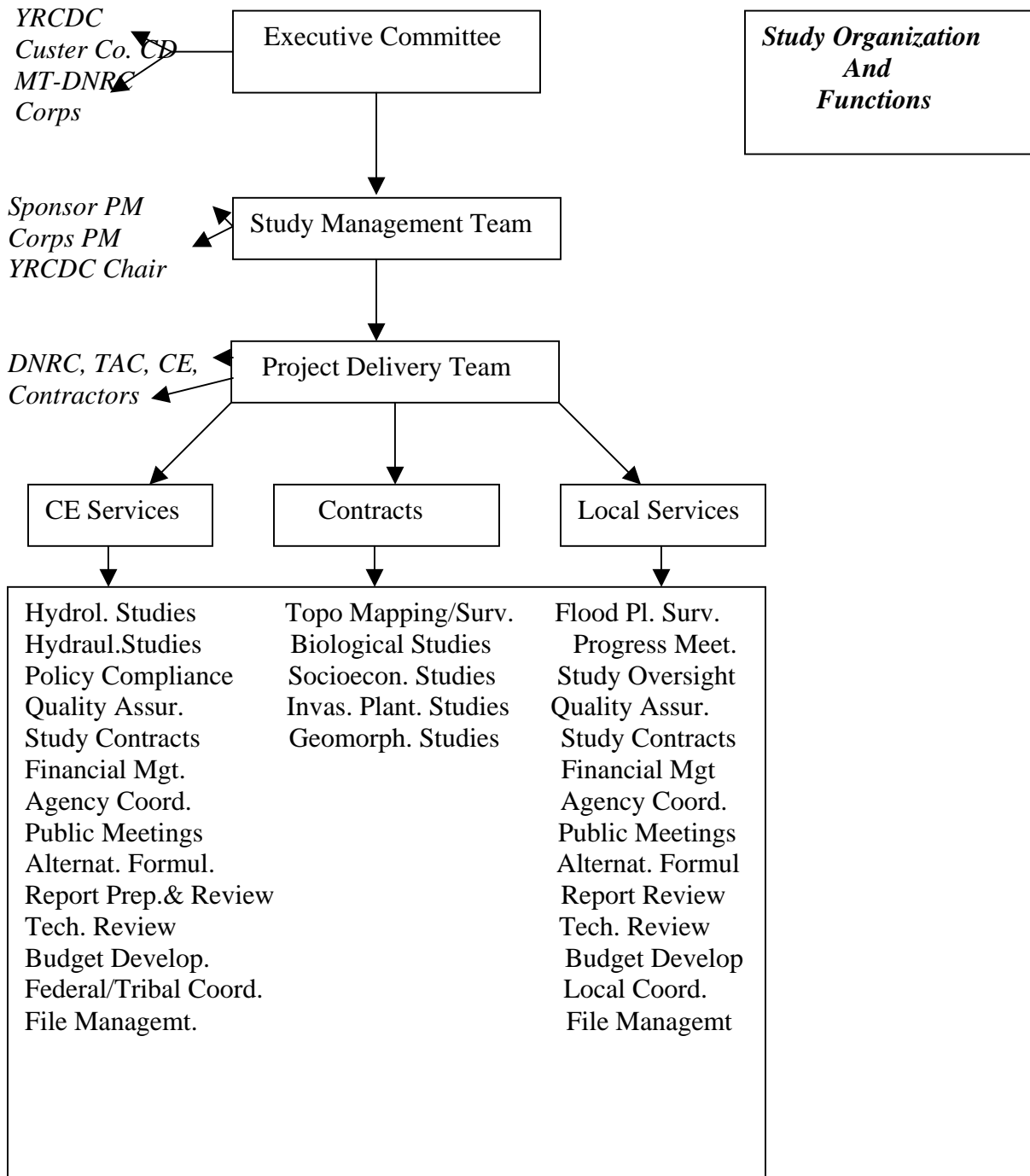
The scopes of work represent agreements between the project managers and first line supervisors of functional organizations. The functions of these organizations in support of the project are defined by the work assigned. All organizations responsible for the tasks, including the local sponsor and other agencies, are included with their organizational codes in the following parent/subtasks.

The primary guidance for Corps management control is ER 5-1-11 "Program and Project Management" dated February, 1998. This establishes the Project Management Business Process system (PMBP), which basically provides for project leadership for an individual designated as a project manager (PM).

Table 2. Parent Tasks and Study Responsibilities

Task No.	Parent Task Description	Omaha District Organization	Other Federal Agencies	Sponsor / Non-Federal Agencies / Contractors
1.0	Project Management	PM-AP		YRCDC; MT-DNRC
2.0	Public Involvement	PM-AP		YRCDC; TAC; RAC; MT-DNRC
3.0	Tribal Consultation	PM-AP; PM-AE		YRCDC; TAC; RAC
4.0	Biology Studies	PM-AE	USFWS; NRCS; EPA	YRCDC; TAC; RAC; Yellowstone County, MT; MT-DFWP; MT-DEQ; MSU-Bozeman; Contractors
5.0	Socioeconomic Studies	PM-AE	USBR	YRCDC; TAC; RAC; MSU-Billings
6.0	Data Acquisition & Topographic Surveys	ED-GD	NRCS	YRCDC; TAC; RAC; MT-DNRC; Contractor
7.0	Information Management / GIS Development	PM-AP; IM-P		YRCDC; TAC; RAC; MT-DNRC; MT-NRIS; Contractor
8.0	Hydrologic Analysis	ED-HE	USBR; FEMA	YRCDC; TAC; RAC; MT-DNRC; Contractor
9.0	Hydraulic Analysis	ED-HD	USGS; FEMA	YRCDC; TAC; RAC; MT-DNRC; Contractor
10.0	Geomorphology Analysis	ED-HF		YRCDC; TAC; RAC; MT-DNRC; Contractor
11.0	Cumulative Effects Analysis & BMP Formulation	PM-AP; PM-AE; ED-HE; ED-HD; ED-HF	USFWS; NRCS; EPA	YRCDC; TAC; RAC; MT-DNRC; MT-DEQ; MT-DFWP; MSU-Bozeman; MSU-Billings; Contractor
12.0	Report Development (incl. ITR)	PM-AP; PM-AE; ED-HE; ED-HD; ED-HF; NWD; ITR Team; HQ	USFWS; NRCS; EPA	YRCDC; TAC; RAC; MT-DNRC
13.0	Program Management; Financial Closeout/Audit	PM-AP; PM-P; NWD; HQ		YRCDC; DNRC

In addition to the general breakout of tasks and responsibilities identified above, a diagram of the structure and function of the study organization is shown in Figure 1. As outlined in the FCSA, there are four other functioning parts to the management or organizational structure. These include the sponsor, the project executive committee, the study management team (SMT) and the project delivery team (PDT).

Figure 1.

Sponsor

The Custer County Conservation District (CCCD), located in Miles City, Montana, will be the study sponsor for the effort on behalf of the YRCDC (Council), an association of 13 conservation districts along the Yellowstone River in Montana and North Dakota. The Council was established to provide leadership, assistance and guidance for the wise use of conservation of natural resources along the river, and has been operating since 1999. Together, the CCCD and the Council have the full authority and capability to furnish the necessary cooperation in terms of study cost sharing and financing during the feasibility study. The sponsor is structured to provide legal, fiscal and administrative services for the study, while the Council (comprised of directors from each of the conservation districts), a staff coordinator, and policy and technical committees will oversee and direct the local contribution to the study. This local structure will also review and provide input to any state or federal study tasks and products through its regular business process.

The main purpose of the Council is to provide local leadership, assistance and guidance for the wise use and conservation of the Yellowstone River's natural resources. This is based on three needs: (1) use technical information on which to base management decisions; (2) obtain broad-based local, regional and national input; and (3) obtain technical and financial assistance as needed to address sustainable resource uses on the Yellowstone River.

As individual and independent entities, the conservation districts in Montana have over 60 years experience in working and cooperating with individuals, groups and various agencies in resource conservation. They are engaged in funding and support for many cooperative watershed projects to address water quality concerns, the promotion of wise agricultural practices through educational and assistance programs to local communities, including land owners, and are involved in permit decisions regarding use of the river through the Section 310 state regulatory permit program and the Section 10/404 regulatory program of the Corps. Conservation districts also have the authority to enter into separate agreements with Federal and state agencies for project funding.

Executive Committee

As indicated in Article IV of the FCSA, study oversight is the responsibility of the Executive Committee. The tentative composition will be the CCCD, the Council, the Montana DNRC and the Omaha District, Corps of Engineers. The Committee will meet periodically throughout the study to review study progress, local input, findings and finances as developed and reported by the Study Management Team (SMT). Other agencies or groups could be added to this Committee if desired. Generally those in administrative or elected positions would be appointed to this committee.

Due to its structure, mission and local representation, the Council directors will not only serve on the Executive Committee, but may also serve as an advisory body to the SMT during the regular monthly meetings. During this period, the Team can readily obtain advice or feedback as needed. If desired, the Council may elect to appoint one or more

representatives to the SMT so that the entire Council can obtain first hand information on study direction and execution of the scope, schedule and budget. This would assist greatly in conducting study business; however, it is acknowledged that at times representatives might not be able to fully reflect the entire Council.

On major decisions, such as significant change in scope, costs, study leadership, or study continuation, the Executive Committee will normally poll its members and strive to achieve consensus. In absence of consensus, however, only the Sponsor and the Corps of Engineers would have veto power. Thus a major change in the Project Management Plan and the FCSA would not be possible unless both the Sponsor and the Corps agreed.

Study Management Team

The SMT is necessary to bring organizational resources and structure to the study and to coordinate execution of study tasks of the Product Delivery Team (PDT). They will meet regularly, usually coincident with Council meetings, to conduct financial business, review and revise schedules as necessary, develop and or review work contracts, advise the Council and Executive Committee on progress and issues, monitor compliance with quality control procedures, coordinate PDT work to resolve any issues that impede progress or quality of work, insure opportunity for public participation and review of products, and interface with the stakeholders and general public on a routine basis.

The SMT could be comprised of a local and Corps PM, and one or more Council representatives and possibly a representative from the State of Montana. At the local level, a member of the Resource Advisory Committee (RAC) or Technical Advisory Committee (TAC) could be appointed. A Corps PM from the Plan Formulation Branch (CENWO-PM-AP) would be assigned as the Corps team member. Any member of the Council could potentially serve. A MDNRC staff person could also be an active team member, for policy, financial and technical input and guidance.

The local PM would have responsibilities relating to management of the local contribution, and generally parallel that related to the Federal contribution. Many of the functions are provided in the attached general schematic. This would include oversight of the study-related work of the RAC and TAC, interfacing with environmental groups and others as well as local and state agencies, and leading in local outreach. Another important function is to insure that any products developed by the Federal participants are reviewed adequately and that the Council and the Sponsor agree with the findings.

The Federal PM has responsibilities generically similar to those of the local PM, but expends more effort in upward reporting within the District, to the Division and Corps headquarters. Also, this person has significant duties related to financial management such as insuring that funds are available before obligation of funding for any study tasks. The PM is also involved in the development, review and negotiation of study contracts, internal coordination with and participation on the PDT, external coordination with Federal agencies, preparation and review of Corps products (especially the feasibility report, internal coordination with and participation on the Corps PDT, external coordination with Federal agencies, preparation and review of Corps products (especially

the feasibility report), and in meeting and site travel requirements. Compliance with environmental regulations, quality assurance/control guidelines, and official records management are also important aspects of the work.

Examples of upward reporting documents include the General Investigations Database Report, monthly scheduling of fund's obligations and expenditures (2101 forms), Executive Summary Reports and yearly fiscal year budget submittal documents. The PM also reports monthly to the District Program Review Board.

Table 3. Functions and Responsibilities of Corps and Sponsor PM's

No.	Item	CE-PM	YRC-PM	Comment
1	Study Point of Contact	Federal	Local & State	Focuses Input
2	Attendance at Monthly Sponsor Meetings	x	x	CE PM When Needed
3	Organize/Conduct Local Input Meetings	x	x	Local Lead and Facilities Provision
4	Conduct RAC, TAC and PDT meetings	x	x	PM's share meeting agendas / results
5	Monthly Study Status Reports	x	x	CE PRB; YRC Sponsor Meetings
6	Provides Periodic Updates (quarterly, yearly) on Study Purposes, Scope & Execution	x	x	Includes monitoring: schedule, progress, expenditures
7	Insures External Outreach & Coordination	x	x	CE—Federal Agencies & Tribes YRC—Local/State Groups
8	In-kind Service Reporting, Crediting & Recording	x	x	YRC—Reporting CE—Crediting & Recording
9	Coordination of Contracted Services	x	x	CE—unless YRC uses own funds to contract work as In-Kind Services
10	Obligation of Study Funds and Services	x	x	CE with YRC approval
11	Ensures Study Products Receive QA/QC Review	x	x	Includes Independent Technical Review; PMP/Policy Review
12	HQ/NWD Study Conferences	x	x	Required Attendance
13	Federal Upward Report Documentation	x		Study Progress and Budget Prep.
14	Maintains Current PMP—Periodic Update	x		
15	Provide Guidance on Planning, NEPA; QA/QC; ITR; Schedule and Funding Status	x		At PDT and other Meetings as Required
16	Conduct Federal Agency Meetings	x		When Required
17	Assemble Feasibility Report	x		
18	Provide Feasibility Report Review	x	x	
19	Maintain Official File & Records	x	x	
20	Primary Advisor on Federal Study Requirements	x		Advice to Executive Committee and PDT

Project Delivery Team (PDT)

The PDT is responsible for accomplishment of the study in accordance with the FCSA, PMP and appropriate Federal, state and local guidance and regulations. Several members of the team have already been active in development of the scopes of work. The team will regularly meet to coordinate on study progress, share interim findings, assess financial status, and all matters related to conducting and completing the study. The team is comprised of representatives from the MDNRC, Montana Department of Environmental Quality, the Council's Technical Advisory Committee, Corps of Engineers, U.S. Geological Survey, U. S. Fish and Wildlife Service, and the Yellowstone County Weed Control Board. The PDT will need to become familiar with the results of the Upper Yellowstone SAMP, in order to avoid duplications, while developing consistencies in objectives, methods and products.

The PDT has the responsibility for technical study conduct and content related to problem identification, plan formulation and development of the feasibility report. This is done under the leadership and direction of the Corps and local PM. The development of a timely, quality product within the established task budget is the responsibility of both the local and Federal PM. The latter will assign study tasks to appropriate representatives of the CE's technical divisions and will be responsible for developing scopes of work, negotiating contracts and reviewing work to be completed by consultants or other state or Federal agencies for specific tasks identified in the PMP. The local PM has similar responsibilities, especially for any work to be completed by Montana agencies or local contractors as in-kind services. Details on the composition of the PDT are provided in Table 4 below.

Table 4: Project Delivery Team

Name	ORG	Position	Phone	E-Mail
Greg Johnson	CENWO-PM-AP	PM, SM	(402) 221-7258	donald.a.becker@usace.army.mil
Stan Danielson	YRCDC	SM	(406) 247-4414	byoder@state.mt.us
Jeff McClenathan	CENWO-ED-HD	Hydraulics, Supervisory	(402) 221-4578	jeffrey.t.mcclenathan@usace.army.mil
Kevin Adams	CENWO-ED-HD	Hydraulics	(402) 221-4120	kevin.d.adams@usace.army.mil
Doug Clemetson	CENWO-ED-HE	Hydrologist Supervisory	(402) 221-4582	douglas.j.clemetson@usace.army.mil
Roger Kay	CENWO-ED-HE	Hydrologist	(402) 221-3150	roger.l.kay@usace.army.mil
John Remus	CENWO-ED-HF	Sedimentology Supervisory	(402) 221-4620	john.i.remus@usace.army.mil
John Garrison	CENWO-ED-HF	Geomorphologist	(402) 221-4617	john.w.garrison@usace.army.mil
William F. Schwening	CENWO-ED-GD	Engineer	(402) 221-4615	william.f.schwening@usace.army.mil
Eric Laux	CENWO-PM-AE	Environmental Res. Specialist	(402) 221-7186	eric.a.laux@usace.army.mil
Mary Lee Johns	CENWO-PM-AE	Native American Specialist	(402) 221-4594	mary.l.johns@usace.army.mil
Gene Sturm	CENWO-PM-AE	Economist	(402) 221-4629	gene.a.sturm@usace.army.mil
Allen Steinle	CENWO-OD-RMT	Regulatory. State Program Manager	(406) 444-1375	allan.e.steinle@usace.army.mil
Richard Rappe	CENWO-PM-P	Program Analyst	(402) 221-4624	richard.d.rappe@usace.army.mil
Lee McCormick	CENWO-CT	Contracting Specialist	(402) 221-4045	lee.m.mccormick@usace.army.mil
Tom Ingram	CENWO-OC	Attorney	(402) 221-7599	t.j.ingram@usace.army.mil
Laura Banker	CENWO-OD-R	GIS Specialist	(402) 221-4212	l.banker@usace.army.mil
Maggie Oldham	CENWO--PA	Public Affairs	(402) 221-3916	maggie.e.oldham@usace.army.mil
Warren Kellogg	NRCS	TAC Chairman	(406) 444-4490	w.kellogg@state.mt.us
Burt Williams	The Nature Conservancy	RAC Chairman	(406) 256-7512	burt_williams@tnc.org
Jim Robinson	Montana-DNRC	TAC Member	(406) 444-4247	jrobinson@state.mt.us
Karl Christians	Montana-DNRC	State Flood Plain Manager	(406) 444-6654	kchristians@state.mt.us
Laurie Zeller	Montana-DNRC	Water Resource Planner	(406) 444-6669	lzeller@state.mt.us
Pat Newby	Montana DEQ	Water Quality Planner	(406) 444-3474	pnewby@state.mt.us
Duane Anderson	Montana NRIS	GIS Administrator	(406) 444-5355	d.Anderson@state.mt.us
Stan Sternberg	Montana-DOT	Engineer		ssternberg@state.mt.us
Carol Watts	Custer Co. CD	Coordinator	(406) 232-7905	carol.watts@mt.usda.gov
Scott Bockness	Yellowstone Co. Weed Management	Biologist	(406) 256-2731	sbockness@co.yellowstone.mt.us
Tom Yoder	MSU, Billings	Economist	(406) 607-2220	tyoder@msubillings.edu
Chuck Parrett	USGS, Helena, MT	Hydrologist	(406) 457-5928	c.parrett@usgs.gov
Rick Devore	USBR Region Office	Hydrologist	(406) 247-7757	r.devore@gp.usbr.gov
George Jordan	USFWS,	Biologist	(406) 247-7365	george_jordan@fws.gov
Peter Ismert	EPA, Region 8		(303) 312-6215	Ismert.Peter@epamail.epa.gov
Karin Boyd	Applied Geomorphology, Inc.	Geomorphologist	(406) 587-6352	kboyd@imt.net

A list of agency and interest group individuals are provided in Table 5. Many of these individuals have provided an important advisory input into development of the PMP.

Table 5. Agency and Organization Liason

Name	ORG	Position	Phone	E-Mail
Keith Kerbel	MT DNRC	Water Resource Planner	(406) 247-4415	kkerbel@state.mt.us
David Pratt	NRCS	Assistant State Conservationist	(406) 232-7905	d.pratt@mt.usda.gov
Tom Sawatzke	US Bureau of Reclamation	Planning Chief	(406) 247-7381	t.sawatzke@gp.usbr.gov
Rick Blaskovich	USBR, Billings State Office	Biologist	(406) 247-7311	r.blaskovitch@gp.usbr.gov
Stan Sternberg	MT Dept. Transportation	State Coordinator	(406) 444-7647	ssternberg@state.mt.us
Mike Penfold	Conservation Forum	Director	(406) 259-4600	penrodmt@aol.com
Peter Ismert	EPA, Region VIII	Environmental Scientist	(303) 312-6215	ismert.peter@epa.gov
Liz Galli-Noble	Upper Yellowstone Task Force	Coordinator	(406) 222-3701	noble@ycsi.net
Darrell Cook	U.S. National Park Service	Superintendent, Ft. Smith	(406) 666-2412	
Jerry Kaiser	BIA, Billings	Regional Fisheries Biol.	(406) 247-7946	Jerry_Kaiser@bia.gov
Robert Lubbers	Audubon Society			rslubbers@mcn.net
John Liou	FEMA, Denver Region VIII	Regional Hydrologist	(303) 235-4836	John.liou@fema.gov
Scott Bosse	Greater Yellowstone Coal.	Rivers Conservation Coordinator	(406) 586-1593	sbosse@greateryellowstone.org
Ken Frazer	MTFWP	Fishery Biologist	(406) 247-2963	kfrazer@state.mt.us
Kay Blehm	Conservation Forum	Coordinator		yellowstonerivermt@msn.com
Marilyn Wade	YRCDC RAC	Member		
Mark Albers	American Rivers			
Tim Felche	US Bureau of Reclamation	Hydrologist, Water Control	(406) 247-7318	
Marc Whisler	US Bureau of Land Mgt	Fishery Biologist	(406) 896-5024	

Change Control Procedure

A procedure is necessary for defining how changes to project scope, schedule and budget can be made from the FCSA and the PMP. Changes must have the approval of the study sponsor and the Corps, as detailed in the following table. Changes or anticipated changes would be reported monthly to the sponsor at the regular meeting of the YRCDC.

Changes in Cost or Schedule			
Item	Level	Approval Level	
Cost		Study Management Team	Executive Council
	Task Level	Approve changes of up to 25%	Approve changes greater than 25%
	Overall Study Level	No approval authority	Approve any change
Schedule			
	Task Level	Approve all changes that do no impact overall study schedule	
	Overall Study Level	No approval authority	Approve any change

In practice, most changes will be made at the SMT level, acting in concert with recommendations from the PDT. If there are no significant changes in scope, costs, and schedule, the project managers can approve the change and record it in a project logbook. A modification to the PMP would also be made.

If there are changes that would result in an increase in total study cost or a delay in completion of the overall study, the Corps will follow a procedure known as the Project Schedule and Cost Change Report (SACCR). After concurrence from the SMT, the Corps PM will prepare the SACCR in concert with a program analyst with Planning, Programs and Project Management Division. This provides a justification for the changes. Action is taken on SACCR's at the Omaha District and Northwestern Division project review boards. To be approved by the Corps at the District and the Division level, a SACCR must first be approved and signed by the study sponsor. At the local level, the request for change and costs would be reviewed by one of the Council's advisory committees. In absence of concurrence on change in scope and schedule, the full Council or even the Executive Committee may need to be involved.

As indicated earlier, both the Corps and the sponsor at the Executive Committee level have veto power over any proposed scope and cost changes that are perceived to be or

might become controversial. This provides both parties protection against commitments that would be unacceptable to either party, the intent is that issues would be resolved at the Study Team Level as much as possible. There will be monthly opportunities for thorough communication about potential issues at the Corps in PRB meetings and at the sponsor level at regular meetings of the YRCDC. Issues that cannot be resolved at the level of the Study Team would be raised to the Executive Council. The Omaha District would assign the Deputy to the Omaha District Commander, currently Mr. Ken Cooper, as the Corps representative on the Executive Council. Any matter that could not be resolved at this level would first be raised to the NWD and possibly HQ level before any final decision would be made. During this time period, the sponsor, the YRCDC and the State would be welcome to participate in discussions and meetings to resolve any issues.

CHAPTER 5. FEASIBILITY STUDY SCHEDULE AND MILESTONES

The milestone schedule is taken from the study schedule included in Appendix A.

Table 6. Study Schedule and Important Milestones

MILESTONE	DATE	CUMULATIVE MONTHS
Sign FCSA	22 January 2004	0
Initiate Feasibility Study	1 February 2004	0
Select Detailed Study Reaches	Complete	0
Data Acquisition & Topographic Surveys Complete	30 June, 2005	16
Biology Studies Complete	30 September 2007	43
Hydrology Studies Complete	31 December 2005	22
Hydraulics Studies Complete	30 June 2007	40
Geomorphology Studies Complete	31 December 2006	34
Socioeconomics Studies Complete	31 December 2006	34
Cumulative Effects Analysis / BMP Formulation Complete	15 May 2008	50.5
Draft Report	15 June 2008	51.5
Independent Technical Review (ITR) Complete	15 August 2008	53.5
Final Report	30 August 2008	54
Final Report Review Conference	15 September 2008	54.5

CHAPTER 6. FEASIBILITY STUDY COST ALLOCATION BY FISCAL YEAR, TASKS AND FEDERAL/NON FEDERAL SHARE

The data for the local cost share in Table 7 below are illustrative only and should not be taken to reflect any future allocation. It will facilitate discussion of scoping costs, scheduling of the tasks, and in identifying potential in-kind services. It is noted the sponsor has not yet addressed the distribution of the 25 per cent match: the cash and the kinds and amounts of in-kind services to be requested.

The information in Table 7 was taken from the final study scope and cost estimate and the study schedule provided in Appendix A. The scope and cost estimate was developed by the PDT and Sponsor during the past several months. The scope and cost estimate assumes a 5 year study duration.

Table 7. Allocation of Costs By Fiscal Year and Federal/Local Shares

F Y	No.	Description	Total Cost	Federal Cash	Sponsor Cash	Sponsor In-kind
04	1	Project Management	\$95,618	\$48,200	\$0	\$47,418
	2	Public Involvement I	\$6,500	\$1,500	\$0	\$5,000
	3	Tribal Coordination	\$3,000	\$3,000	\$0	\$0
	4	Biology Studies	\$65,020	\$0	\$31,700	\$33,320
	5	Socioeconomic Studies	\$14,400	\$12,500	\$1,000	\$900
	6	Data Acquisition & Topographic Surveys.	\$501,000	\$22,000	\$0	\$475,000
	7	Info. Mgmt & GIS Development	\$7,970	\$6,100	\$0	\$1,870
	8	Hydrology	\$40,000	\$30,000	\$10,000	
	9	Hydraulics	\$40,000	\$30,000	\$10,000	
	10	Geomorphology	\$14,100	\$12,600	\$0	\$1,500
	11	Cumulative Effects / BMP Formulation	\$59,500	\$16,500	\$14,000	\$29,000
	12	Report Development	\$0	\$0	\$0	\$0
	13	Programs Management	\$3,500	\$3,000	\$0	\$500
		Sub-Total	\$812,318	\$162,110	\$46,700	\$603,508
05	1	Project Management	\$105,000	\$53,000	\$0	\$52,000
	2	Public Involvement I	\$39,480	\$15,980	\$500	\$23,000
	3	Tribal Coordination	\$10,247	\$9,120	\$0	\$1,127
	4	Biology Studies	\$332,099	\$175,595	\$76,935	\$79,569
	5	Socioeconomic Studies	\$178,000	\$115,000	\$59,000	\$4,000
	6	Data Acquisition & Topographic Surveys.	\$677,000	\$665,000	\$0	\$12,000
	7	Info. Mgmt & GIS Development	\$37,000	\$30,500	\$0	\$6,500
	8	Hydrology	\$36,710	\$34,210	\$0	\$2,500
	9	Hydraulics	\$375,925	\$346,625	\$0	\$29,300
	10	Geomorphology	\$39,000	\$37,500	\$0	\$1,500
	11	Cumulative Effects / BMP Formulation	\$49,500	\$21,500	\$	\$28,000
	12	Report Development	\$0	\$0	\$0	\$0
	13	Programs Management	\$4,500	\$1,000	\$0	\$1,000
		Sub-Total	\$2,036,841	\$1,662,410	\$136,435	\$237,996
06	1	Project Management	\$105,000	\$53,000	\$0	\$52,000
	2	Public Involvement I	\$11,000	\$3,000	\$0	\$8,000
	3	Tribal Coordination	\$0	\$0	\$0	\$0
	4	Biology Studies	\$309,200	\$219,080	\$8,600	\$81,520
	5	Socioeconomic Studies	\$118,000	\$110,000	\$4,000	\$4,000
	6	Data Acquisition & Topographic Surveys.	\$0	\$0	\$0	\$0

	7	Info. Mgmt & GIS Development	\$22,500	\$17,000	\$0	\$5,500
	8	Hydrology	\$189,090	\$189,090	\$0	\$0
	9	Hydraulics	\$219,825	\$217,025	\$0	\$2,800
	10	Geomorphology	\$99,000	\$83,500	\$0	\$15,500
	11	Cumulative Effects / BMP Formulation	\$3,000	\$1,000	\$	\$2,000
	12	Report Development	\$0	\$0	\$0	\$0
	13	Programs Management	\$4,500	\$1,000	\$0	\$1,000
		Sub-Total	\$892,025	\$707,105	\$12,600	\$172,320
07	1	Project Management	\$105,000	\$53,000	\$0	\$52,000
	2	Public Involvement I	\$39,480	\$15,980	\$500	\$23,000
	3	Tribal Coordination	\$0	\$0	\$0	\$0
	4	Biology Studies	\$103,390	\$91,675	\$0	\$11,715
	5	Socioeconomic Studies	\$74,020	\$68,920	\$1,000	\$4,100
	6	Data Acquisition & Topographic Surveys.	\$0	\$0	\$0	\$0
	7	Info. Mgmt & GIS Development	\$22,500	\$17,000	\$0	\$5,500
	8	Hydrology	\$0	\$0	\$0	\$0
	9	Hydraulics	\$230,970	\$223,070	\$0	\$7,900
	10	Geomorphology	\$81,000	\$69,000	\$0	\$12,000
	11	Cumulative Effects / BMP Formulation	\$3,000	\$1,000	\$	\$2,000
	12	Report Development	\$0	\$0	\$0	\$0
	13	Programs Management	\$4,500	\$1,000	\$0	\$1,000
		Sub-Total	\$664,360	\$543,645	\$1,500	\$119,215
08	1	Project Management	\$148,510	\$88,000	\$0	\$60,510
	2	Public Involvement I	\$61,980	\$29,280	\$700	\$32,000
	3	Tribal Coordination	\$23,709	\$20,655	\$0	\$3,054
	4	Biology Studies	\$0	\$0	\$0	\$0
	5	Socioeconomic Studies	\$0	\$0	\$0	\$0
	6	Data Acquisition & Topographic Surveys.	\$0	\$0	\$0	\$0
	7	Info. Mgmt & GIS Development	\$29,115	\$22,245	\$0	\$6,870
	8	Hydrology	\$0	\$0	\$0	\$0
	9	Hydraulics	\$0	\$0	\$0	\$0
	10	Geomorphology	\$0	\$0	\$0	\$0
	11	Cumulative Effects / BMP Formulation	\$283,800	\$197,800	\$0	\$86,000
	12	Report Development	\$110,000	\$63,500	\$0	\$46,500
	13	Programs Management	\$33,600	\$23,600	\$0	\$10,000
		Sub-Total	\$690,714	\$445,080	\$700	\$244,934
		Base Sub-Total	\$5,272,378	\$3,708,970	\$197,935	\$1,365,473
		Study Contingency (10%)	\$527,238			
		Grand Total (rounded)	\$5,800,000			

CHAPTER 7. QUALITY CONTROL AND INDEPENDENT TECHNICAL REVIEW

Quality study management and independent technical review are integral to the PMP. An overriding objective is to integrate both while completing the feasibility study within a reasonable time period (4 years) and within budget. A detailed quality control plan (QCP) is provided in Appendix C that establishes processes and criteria for development of a quality product that meets or exceeds customer expectations. The Corps and the sponsor will share responsibility for quality control, including independent technical review. Policy related problems or issues will be elevated to the appropriate higher

authority for resolution as they develop. Quality review milestones for important study decisions in the planning process were previously provided in Table 6. These are important so that the technical results can be relied upon in further work.

Independent technical review (ITR), a form of peer review, is conducted on all study products to a degree commensurate with study scope, scale and level of risk. The level of technical review is influenced by the degree of technical difficulties, policy issues, customer expectations, study scope and cost, individual project management processes. To insure timely ITR, review teams are generally formed early in the study process through coordination with the project manager, the PDT, appropriate supervisors and the Northwestern Division (NWD). At the local level the sponsor utilizes a Resource Advisory Committee and a Technical Advisory Committee to deal with policy and technical quality issues, including independent technical review. Generally, ITR review needs to be performed by individuals who have senior-level competence in the specific type of work performed. Selected individuals will have the appropriate knowledge, skills and experience necessary to perform the task. The person might be in a Corps Division office, a District field operations office, in the Planning and Programs Office of another District, the technical and planning offices of another Federal Agency such as the USGS, or a private contractor not involved in technical work on the project. For products developed under contract, the contractor is responsible for quality control and ITR.

Quality products start with good data collection methods that utilize standard and acceptable technical methods and reliable technology to arrive at the information required. Assumptions made will be in accordance with established guidance and policy, and any deviations clearly identified and properly approved. Data from the scientific and “gray” literature will be appropriately referenced and all methods described so that the effort can be understood and repeated by others if necessary. The results obtained by these methods should have a level of confidence so that they can be extended to river reaches that were not specifically sampled.

CHAPTER 8. PLANNING FRAMEWORK, ENVIRONMENTAL COMPLIANCE, AND VALUE MANAGEMENT

The study will generally follow the guidance set forth by the following Corps of Engineers and other Federal regulations and guidelines:

- “Policy and Planning, Guidance for Conducting Civil Works Planning Studies,” ER 1105-2-100, 22 April 2000.
- “Project Management”, ER 5-7-1, 17 August 2001
- “Procedures for Implementing the National Environmental Protection Act (NEPA),” ER 200-2-2, 29 March 1996.
- “Engineering and Design for Civil Works Projects,” EC 1110-2-268
- “Ecosystem Restoration in the Civil Works Program,” EC 12105-2-210
- 1978 Council of Environmental Quality Guidelines

Study Phases, Project Reviews and Authorization, Environmental Compliance

General Investigation (GI) studies are conducted in two phases in accordance with the Water Resources Development Act (WRDA) of 1986: the reconnaissance phase and the feasibility phase.

A reconnaissance study, culminating in a 905(b) analysis, determines whether or not planning to develop a project should proceed to the more detailed feasibility study. It is 100 per cent federally funded. The 905 (b) analysis concluded there is interest in conducting a feasibility study to develop a corridor plan. The 905 (b) report was approved by Corps Headquarters on 13 August 2003.

The Corps and sponsor will develop the feasibility study in accordance with the schedule, narrative tasks, cooperation agreements, milestones, funding availability and applicable laws, policies and regulations found in ER 1105-2-100 and ER 5-1-11. In addition to Corps and sponsor input and review, the conservation districts, state and Federal agencies, tribes and other numerous stakeholders will be involved in the process. The feasibility study and environmental assessment will accomplish the following: inventory critical corridor resource uses, assess cumulative effects from past, present and foreseeable future development, and develop alternative plans which could address issues and impacts relating to current resources uses such as: water management practices, flood plain and river channel functions, fisheries and riparian habitat health, and impacts of critical infrastructure such as bridges, roads, river diversions and intakes. The feasibility study will be cost shared at a ratio of 75 per cent Federal and 25 percent local.

The Corps plan formulation process is based on economic and environmental Principles and Guidelines (P & G) that were developed in 1983. They were established to formulate reasonable plans responsible to national, state, and local concerns. The Corps process places specific emphasis on sound judgment and common sense in application of these guidelines, with emphasis on missions such as economic development and environmental restoration where appropriate and commensurate with sustainable uses of natural resources. A 6-step process is inherent in the P & G listed as follows:

- Step 1 - Identifying problems and opportunities; objectives/constraints
- Step 2 - Inventorying and forecasting conditions
- Step 3 - Formulating alternative plans
- Step 4 - Evaluating alternative plans
- Step 5 - Comparing alternative plans
- Step 6 - Selecting a plan

The process tends to be iterative and concurrent in practice, due to frequent need to reexamine assumptions, consider technical and public inputs and implementation.

The study will follow applicable environmental and planning guidelines as promulgated by Federal statute (NEPA), and complementary state policies and procedures under the Montana Environmental Protection Act. A listing of applicable statutes is provided in Appendix B. The assessment will be corridor wide, although of necessity the data will need to be extracted from representative samples. Definition of cumulative assessment follows that of the 1978 U.S. Council of Environmental Quality Guidelines found in Section 1508.7. This regulation reads:

“Cumulative impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time”.

In terms of impact scale and significance, it is unlikely that any projects in the reasonable foreseeable future will compare with the scale of the past 120 years of development along the river. Most of the initial impacts from the early, large projects have already occurred, although they may not be well understood and there are current concerns about operations. If any new projects are identified during the course of the study, the effects will be included within the evaluation. Any individual construction projects would likely require individual environmental assessment, compliance documents, and public disclosure and review.

The completed feasibility study will be forwarded to Corps Headquarters in Washington, D.C. for review. During this review, a feasibility review conference is conducted (if necessary) and all significant issues addressed and resolved. The Chief of Engineers report, which includes recommendations, is prepared and forwarded along with the feasibility study to the Assistant Secretary of the Army for Civil Works [ASA (CW)]. The report along with ASA (CW) recommendations, is then forwarded to the Office of Management and Budget (OMB) for review and comment. Once the recommendations and reports have been approved by OMB, the ASA (CW) forwards the report to Congress for authorization and then appropriations.

Assumptions, Constraints and Value Management

A major assumption is that the study funding will be in place to execute desired tasks identified in the detailed study schedule (Appendix A). For this to happen, both the Federal funding and the local funding must be available at the same time and in proportional amounts. Without this timing, the schedule will slip and require adjustments that may be major or minor, resulting in cost escalation and interruptions of product delivery. The Federal share is dependent upon yearly Congressional appropriations as is some of the sponsor's cash from state appropriations and approval. Another assumption is that both parties will be able to maintain stable staffing levels.

Constraints are numerous and are linked to the funding cycles and staff availability limitations alluded to above. Spatial, costs and timing considerations are other constraints on starting and completing the problem identification and analyses phases, as representative samples of river conditions must be taken given the extensive length of the river corridor. Topographic and hydrographic data may not be obtained during periods when river flows are exceptionally high or low, resulting in significant slippages for many tasks. Also, there are numerous constraints that will affect project formulation. Available supply of river resources may limit formulation as well as legal, policy and authority restraints. Finally, implementation of the plan can be limited by funding available to local, state and the Federal government.

Value Management is maintaining important functions in regard to efficiency, effectiveness and cost control during the study. Both the sponsor and Corps are very concerned about these variables and have several meetings on the subject in discussing the cost share agreement and PMP. If any projects are formulated, designed and approved by the sponsor in the study, a value engineering analysis may be conducted on projects exceeding \$1,000,000 or are very complex in design.

CHAPTER 9. COMMUNICATION AND COORDINATION

Both the Corps and the Sponsor have adequate internal communication mechanisms in place, which have been utilized during the reconnaissance phase. However, these need to be refined to facilitate transfer of information and mutually understand how each agency conducts its business.

Internal communication within the Corps is at the monthly PDT and PRB meetings. Vertical communication occurs during periodic Division field level meetings, and through In Progress Reviews, Alternative Formulation Briefings, and Feasibility Report conferences with Division and Corps HQ. Issues are addressed at these times, as well as options to address them.

At the horizontal or state and Federal agency level, the sponsor and the Corps will improve awareness of the study between Federal, state and tribal entities by use of memos and news releases. This is essential to accomplishing the work tasks, conducting critical review and developing plan alternatives.

At the local level, communication between conservation districts takes place at regular monthly meetings, and the CE and Council have already established a formal list of federal and state agency representatives during the reconnaissance phase. At the local level the regular Council meetings and coincident RAC and TAC meetings will normally be the focal point of study discussions. The existing list of local interest groups and governmental entities with stakes or interests in the study would be expanded to improve flow of information and invite wider participation. Notices of the Council and committee meetings will be forwarded to the PDT, the SMT, and the Executive Committee at least

two weeks prior. The use of VTC meetings between the sponsor and the Corps will be considered pending identification of suitable facilities.

Periodic public meetings will be scheduled along the river to obtain information, present it and obtain feedback. These would be advertised in the local media.

The sponsor's PM is needed to facilitate communication and coordination. This is viewed as critical given the number of entities involved in conduct of the study and the wide-range of interests. Questions and issues in the basin can often be best addressed by quick response and involvement of the local study manager.

The sponsor, the Natural Resources and Conservation Service, the U.S. Bureau of Reclamation, and the Omaha District, Corps of Engineers, the U.S.G.S. and the Montana Department of Environmental Quality have or are conducting studies which may relate in a positive way to proposed study tasks. The study will recognize and coordinate with these efforts, thus exploring collaborative opportunities for improving the study, avoid duplicative or overlapping effort and to minimize or avoid conflict. These activities are identified in the 905 (b) analysis and will not be duplicated here.

CHAPTER 10. SAFETY AND RISKS

The Corps, the sponsor and their contractors will comply with all local, state and Federal safety rules and regulations to protect the safety and health of employees engaged in official study activities. The project managers are responsible for safety considerations during the study. A major concern will be made to insure that any survey or site visits involving the river or its banks are supervised by staff who are aware of potential hazards, especially those related to water currents and erosion. Appropriate safety briefings prior to any field activity will be conducted to appraise groups of any hazards. Watercraft used on the river for observational/data collection shall be equipped with appropriate water flotation and other devices that reduce the risk of loss of life or equipment damage. Also, appropriate authorization will be obtained to access private lands as needed.

Risk is the exposure to chance of failure. Risk management seeks to reduce risk by identifying the risks and placing controls on it. In the context of the study goals, a number of procedures are in place through this PMP to assist in reducing risk of unrealistic scope, cost estimates and study resources. These will help to maintain schedule within cost limitations and under project managers span of control authority. Non performance of a key study task by a study partner is of concern, but if identified early on, can be remedied by contracting for the services. Contingency funds are also budgeted. A risk also exists in that either one of the signatories to the FCSA, for various reasons, may decide to terminate the agreement. This would result in wasted Federal resources, unless another partner can be located. Controls that help reduce risk of study termination are the monthly meetings of the sponsor, the monthly PRB meetings held at the Omaha District, project managers working at both the District and local levels, and vertical coordination meetings with HQ and NWD.

CHAPTER 11. ACQUISITION AND PROCUREMENT

An acquisition plan is necessary to provide a picture of what services are being obtained and how it will be done. The PM must ensure that any acquisition is coordinated with appropriate functional elements and the contracting office of the agency.

The largest procurement needed is acquisition of contractor expertise to obtain topographic and hydrographic mapping data and photography to produce the Digital Terrain Models. This procurement will be the responsibility of the Omaha District Surveys and Mapping Office in coordination with the sponsor. The contracting process at the Omaha District is in place and is governed by regulations in the FAR and EFAR. The contracts would be fully obligated if they fell within a fiscal year; otherwise funds will be obligated according to estimated expenditures for each fiscal year. CEMRO-CD-C will receive the scope of services, maps, drawings, government estimate, labor codes and other necessary information from the PM or applicable functional office.

Other tasks to be procured include fish habitat studies, flood plain riparian and invasive vegetation studies, riparian bird studies, socioeconomic studies and river embankment and bridge surveys. Some of the contractors may be federal, state or local agencies; others may be public universities or consultants in the private sector.

All scopes of services for tasks identified in the PMP will be approved by technical functional units of the Sponsor and Corps. Decisions on contracts to be negotiated and funded directly by the Corps are not yet final. It is possible the sponsor may choose to contract some of the work through sub-agreements with one or more of its partners. Following execution of the FCSA, this work would be eligible as work-in-kind.

The Corps will insure that the QC/QA and independent technical review work will be conducted as part of any contracts issued under existing authorities and policies.

CHAPTER 13. CLOSEOUT PLAN

The process covers closeout of the study and its activities, including but not limited to completion of the feasibility report, fiscal completion, checking of contractor performance, and evaluations of the process.

The PM is responsible for closeout; however, the required actions will may require participation of the PDT members, especially for closeout of financial cost accounts. The closeout would also apply in situations where the project might be terminated. All outstanding obligations and commitments will need to be cleared. The sponsor's PDT member responsible for keeping financial records will assist the PM in carrying out an audit of feasibility study cost expenditures, including funds used for contracted

services and those for in-kind services. The PM shall also insure that all contracted services products have been accepted prior to making any final payments.

Omaha District procedures for closeout shall follow standard operation procedures. The amounts of Federal and non-federal costs will be determined and a balancing of expenditures based on the approved study cost share ratio will be determined. The outcome will determine the direction and amount of any funds to be transferred between the sponsor and the Federal government.

The cost of the closeout is to be included in the PMP scope per guidance in Article V, Part B of the current model FCSA.

CHAPTER 14. APPROVALS AND CERTIFICATION

Approvals at the PDT, Supervisory, and District/Sponsor Levels are provided below.

Project Delivery Team

The undersigned have participated as the Corps Project Delivery Team for the Project Management Plan. They have reviewed and approved the PMP for the subject project. Separately, a letter from the Custer County Conservation District and its supporting partners verify local approval of the Project Management Plan and the added local public participation that was necessary to develop it.

Position	Name	Signature	Date
Project Manager	Greg Johnson	_____	_____
Hydrologic Engineer	Roger Kay	_____	_____
Hydraulic Engineer	Kevin Adams	_____	_____
Geomorphologist	John Garrison	_____	_____
Surveys & Mapping. Section	Bill Schwening	_____	_____
Environ. & Econ. Section-Biologist	Eric Laux	_____	_____
Environ. & Econ. Section-Economist	Gene Sturm	_____	_____
Environ. & Econ. Section Native American Specialist	Mary Lee Johns	_____	_____
Office of Counsel Attorney	Tom Ingram	_____	_____

Supervisor Approval

The undersigned supervisors certify that all actions and verifications have been completed within the District. The Project Management Plan is complete and meets professional quality standards of the District.

<u>Position</u>	<u>Name</u>	<u>Signature</u>	<u>Date</u>
Programs & Project. Management Division, Planning Branch Chief	Ralph Roza	_____	_____
Plan Formulation Section Chief	David Brandon	_____	_____
Environ. & Econ. Section Chief	Candace Gorton	_____	_____
Engineering Division, Hydrologic Engineering Branch Chief	Larry Buss	_____	_____
Hydrology Section Chief	Douglas Clemetson	_____	_____
Hydraulics Section Chief	Jeff McClenathan	_____	_____
Sediment & Channel Stabilization Section Chief	John Remus	_____	_____
Office of Counsel	Gary Henningsen	_____	_____

Certification

This is to certify that the undersigned are aware of the scope and commitments cited in the Project Management Plan; have reviewed the document; and concur with the scope, structure and estimated cost of \$5,800,000 for the Yellowstone River Corridor Study, Montana and North Dakota.

LTC TODD E. SKOOG
Deputy District Engineer
Omaha District

DATE

MARC ABERG
CHAIRMAN, CUSTER
COUNTY CONSERVATION
DISTRICT

DATE

Note: If further changes in this scope of work, cost and schedule are necessary throughout the life of the feasibility study, approval to make those changes has been delegated to the project managers; except in the case where those changes would add significant increase to the duration of the study or if there was a net cost increase. If either of those conditions exist, then approval by the Study Management Group and Executive Committee would be required.

AGREEMENT
BETWEEN THE DEPARTMENT OF THE ARMY
AND
THE CUSTER COUNTY CONSERVATION DISTRICT
FOR THE YELLOWSTONE RIVER CORRIDOR STUDY

THIS AGREEMENT is entered into this 22nd day of January, 2004, by and between the Department of the Army (hereinafter the "Government"), represented by the U.S. Army Engineer, Omaha District (hereinafter the "District Engineer"), and the Custer County Conservation District (hereinafter the "Sponsor"),

WITNESSETH, that

WHEREAS, the Congress (Senate and/or House Committees) has authorized the U. S. Army Corps of Engineers to conduct a comprehensive study of the Yellowstone River from Gardiner, Montana, to the confluence of the Missouri River to determine the hydrologic, biological and socioeconomic cumulative impacts on the river pursuant to Section 431 of the Water Resources Development Act of 1999; and

WHEREAS, the Government has conducted a reconnaissance study of the Yellowstone River from Gardiner, Montana, to the confluence of the Missouri River to determine the hydrologic, biological and socioeconomic cumulative impacts on the river, pursuant to this authority, and has determined that further study (hereinafter the "Study") is required to fulfill the intent of the study authorities; and

WHEREAS, the Sponsor has the authority and capability to furnish the cooperation hereinafter set forth and is willing to participate in study cost sharing and financing in accordance with the terms of this Agreement;

NOW THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS

For the purposes of this Agreement:

A. The term "Study Costs" shall mean all disbursements by the Government pursuant to this Agreement, from Federal appropriations or from funds made available to the Government by the Sponsor, and all negotiated costs of work performed by the Sponsor pursuant to this Agreement. Study Costs shall include, but not be limited to: labor charges; direct costs; overhead expenses; supervision and administration costs; the costs of participation in Study Management and Coordination in accordance with Article IV of this Agreement; the costs of contracts with third parties, including termination or suspension charges; and any termination or suspension costs (ordinarily defined as those costs necessary to terminate ongoing contracts or obligations and to properly safeguard the work already accomplished) associated with this Agreement.

B. The term "estimated Study Costs" shall mean the estimated cost of performing the Study as of the effective date of this Agreement, as specified in Article III.A. of this Agreement.

C. The term "Study Period" shall mean the time period for conducting the Study, commencing with the release to the U.S. Army Corps of Engineers Omaha District of initial Federal funds

following the execution of this Agreement and ending when the Assistant Secretary of the Army (Civil Works) submits to Congress a report on the results of the Study.

D. The term "PMP" shall mean the Project Management Plan, which is attached to this Agreement and which shall not be considered binding on either party and is subject to change by the Government, in consultation with the Sponsor.

E. The term "negotiated costs" shall mean the costs of in-kind services to be provided by the Sponsor in accordance with the PMP.

F. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

ARTICLE II - OBLIGATIONS OF PARTIES

A. The Government, using funds and in-kind services provided by the Sponsor and funds appropriated by the Congress of the United States, shall expeditiously prosecute and complete the Study, in accordance with the provisions of this Agreement and Federal laws, regulations, and policies.

B. In accordance with this Article and Articles III.A, III.B. and III.C. of this Agreement, the Sponsor shall contribute cash and in-kind services equal to twenty five (25) percent of Study Costs. The Sponsor may, consistent with applicable law and regulations, contribute up to one hundred (100) percent of the Sponsor's share of the Study Costs through the provision of in-kind services. The in-kind services to be provided by the Sponsor, the estimated negotiated costs for those services, and the estimated schedule under which those services are to be provided are specified in the PMP. Negotiated costs shall be subject to an audit by the Government to determine reasonableness, allocability, and allowability.

C. The Sponsor understands that the schedule of work may require the Sponsor to provide cash or in-kind services at a rate that may result in the Sponsor temporarily diverging from the obligations concerning cash and in-kind services specified in paragraph B. of this Article. Such temporary divergences shall be identified in the quarterly reports provided for in Article III.A. of this Agreement and shall not alter the obligations concerning costs and services specified in paragraph B. of this Article or the obligations concerning payment specified in Article III of this Agreement.

D. No Federal funds may be used to meet the Sponsor's share of Study Costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

E. The award and management of any contract with a third party in furtherance of this Agreement which obligates Federal appropriations shall be exclusively within the control of the Government. The award and management of any contract by the Sponsor with a third party in furtherance of this Agreement which obligates funds of the Sponsor and does not obligate Federal appropriations shall be exclusively within the control of the Sponsor, but shall be subject to applicable Federal laws and regulations.

ARTICLE III - METHOD OF PAYMENT

A. The Government shall maintain current records of contributions provided by the parties, current projections of Study Costs, current projections of each party's share of Study Costs. At least quarterly, the Government shall provide the Sponsor a report setting forth this information. As of the effective date of this Agreement, estimated Study Costs are \$5,800,000 and the Sponsor's share of estimated Study Costs is \$1,450,000. In order to meet the Sponsor's cash payment requirements for its share of estimated Study Costs, the Sponsor must provide a cash contribution currently estimated to be \$198,000. The dollar amounts set forth in this Article are based upon the Government's best estimates, which reflect the scope of the study described in the PMP, projected costs, price-level changes, and anticipated inflation. Such cost estimates are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Sponsor.

B. The Sponsor shall provide its cash contribution required under Article II.B. of this Agreement in accordance with the following provisions:

1. For purposes of budget planning, the Government shall notify the Sponsor by January 31 of each year of the estimated funds that will be required from the Sponsor to meet the Sponsor's share of Study Costs for the upcoming fiscal year.

2. No later than 60 calendar days prior to the scheduled date for the Government's issuance of the solicitation for the first contract for the Study or for the Government's anticipated first significant in-house expenditure for the Study, the Government shall notify the Sponsor in writing of the funds the Government determines to be required from the Sponsor to meet its required share of Study Costs for the first fiscal year of the Study. No later than 30 calendar days thereafter, the Sponsor shall verify to the satisfaction of the Government that the Sponsor has deposited the required funds in an escrow or other account acceptable to the Government, with interest accruing to the Sponsor.

3. For the second and subsequent fiscal years of the Study, the Government shall, no later than sixty 60 calendar days prior to the beginning of the fiscal year, notify the Sponsor in writing of the funds the Government determines to be required from the Sponsor to meet its required share of Study Costs for that fiscal year, taking into account any temporary divergences identified under Article II.C of this Agreement. No later than 30 calendar days prior to the beginning of the fiscal year, the Sponsor shall make the full amount of the required funds available to the Government through the funding mechanism specified in paragraph B.2. of this Article.

4. The Government shall draw from the escrow or other account provided by the Sponsor such sums as the Government deems necessary to cover the Sponsor's share of contractual and in-house fiscal obligations attributable to the Study as they are incurred.

5. In the event the Government determines that the Sponsor must provide additional funds to meet its share of Study Costs, the Government shall so notify the Sponsor in writing. No later than 60 calendar days after receipt of such notice, the Sponsor shall make the full amount of the additional required funds available through the funding mechanism specified in paragraph B.2. of this Article.

C. Within ninety (90) days after the conclusion of the Study Period or termination of this Agreement, the Government shall conduct a final accounting of Study Costs, including disbursements by the Government of Federal funds, cash contributions by the Sponsor, and credits for the negotiated costs of the Sponsor, and shall furnish the Sponsor with the results of

this accounting. Within thirty (30) days thereafter, the Government, subject to the availability of funds, shall reimburse the Sponsor for the excess, if any, of cash contributions and credits given over its required share of Study Costs, or the Sponsor shall provide the Government any cash contributions required for the Sponsor to meet its required share of Study Costs.

ARTICLE IV - STUDY MANAGEMENT AND COORDINATION

A. To provide for consistent and effective communication, the Sponsor and the Government shall appoint named senior representatives to an Executive Committee. Thereafter, the Executive Committee shall meet regularly until the end of the Study Period.

B. Until the end of the Study Period, the Executive Committee shall review the scope of the Study, including the relative emphasis to be placed on each of the Study's objectives and concerns, as well as the consequent resource allocation necessary to effectuate the various scoping alternatives.

C. The Executive Committee may make recommendations that it deems warranted to the District Engineer and the Sponsor concerning the matters described in paragraph B., including suggestions to avoid potential sources of dispute. The Government and the Sponsor shall consider such recommendations, and mutually agree on matters of scope, emphasis, and resource allocation, and incorporate such decisions in the PMP. Nothing herein shall affect the discretion of the District Engineer to implement and administer the study pursuant to Federal law, or the obligation of the Sponsor to provide the designated share of Study Costs.

D. The Executive Committee shall appoint representatives to serve on a Study Management Team. The Study Management Team shall keep the Executive Committee informed of the progress of the Study and of significant pending issues and actions, and shall prepare periodic reports on the progress of all work items identified in the PMP.

E. The costs of participation in the Executive Committee (including the cost to serve on the Study Management Team) shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE V - DISPUTES

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. Such costs shall not be included in Study Costs. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VI - MAINTENANCE OF RECORDS

A. Within 60 days of the effective date of this Agreement, the Government and the Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will

properly reflect total Study Costs. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to state and local governments at 32 C.F.R. Section 33.20. The Government and the Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures for a minimum of three years after completion of the Study and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Sponsor is required to conduct under the Single Audit Act 1996, 31 U.S.C. Sections 7501-7507. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits shall be included in total Study Costs and shared in accordance with the provisions of this Agreement.

ARTICLE VII - RELATIONSHIP OF PARTIES

The Government and the Sponsor act in independent capacities in the performance of their respective rights and obligations under this Agreement, and neither is to be considered the officer, agent, or employee of the other.

ARTICLE VIII - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE IX - FEDERAL AND STATE LAWS

In the exercise of the Sponsor's rights and obligations under this Agreement, the Sponsor agrees to comply with all applicable Federal and State laws and regulations, including Section 601 of Title VI of the Civil Rights Act of 1964 (Public Law 88-352) and Department of Defense Directive 5500.11 issued pursuant thereto and published in 32 C.F.R. Part 195, as well as Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army".

ARTICLE X - TERMINATION OR SUSPENSION

A. This Agreement shall terminate at the conclusion of the Study Period, and neither the Government nor the Sponsor shall have any further obligations hereunder, except as provided in Article III.C.; provided, that prior to such time and upon thirty (30) days written notice, either party may terminate or suspend this Agreement. In addition, the Government shall terminate this Agreement immediately upon the failure of the sponsor to fulfill its obligation under Article III. of this Agreement. In the event that either party elects to terminate this Agreement, both parties shall conclude their activities relating to the Study and proceed to a final accounting in accordance with Article III.C. of this Agreement. Upon termination of this Agreement, all data and information generated as part of the Study shall be made available to both parties.

B. Any termination of this Agreement shall not relieve the parties of liability for any obligations previously incurred, including the costs of closing out or transferring any existing contracts.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer.

Custer County Conservation District

BY _____

Marc Aberg, Chairman
Custer County Conservation District
Custer County, MT

DEPARTMENT OF THE ARMY

BY _____

Kurt F. Ubbelohde
Colonel, Corps of Engineers
District Engineer
Omaha District